1988
South Dakota
Motor Vehicle Traffic Accident Summary

George S. Mickelson
Governor

Prepared By
Department of Transportation
Accident Records Office

In Cooperation With
Department of Commerce & Regulation
Office of Highway Safety

MARKS
SPOT
THE
THINK!
DRIVE
SAFELY

STATE OF SOUTH DAKOTA

GEORGE S. MICKELSON
GOVERNOR

EXECUTIVE OFFICE
STATE CAPITOL
PIERRE, SOUTH DAKOTA
57501
(605)773-3212

July 3, 1989

Dear Reader:

It is my pleasure to introduce the 1988 edition of the South Dakota Motor Vehicle Accident Summary. I wish to commend those who have been dedicated to continuing to stress the importance of traffic safety. Their efforts have been rewarded in the increased awareness of the importance safe driving plays on everyone in the state.

The continued success of travel safety in South Dakota depends on the efforts of many different departments and individuals. Whether it is law enforcement personnel detecting and apprehending the drinking driver and speeding motorist, the traffic engineers striving to keep our roadways safe, or the work done all over the state on increasing the awareness of safe travel, they all strive to reduce the chance of possible tragedy on South Dakota roads.

The traffic safety program in South Dakota is continuing to operate at a high level and is vastly increasing the number of South Dakotans aware of the great benefits of safer travel. I look forward to even more improved results and achievements. Please drive defensively and sober, and please...BUCKLE UP!

Very truly yours,

GEORGE S. MICKELSON

CELEBRATE THE CENTURY
1889 1989
South Dakota

TABLE OF CONTENTS

		PAGE
I.	INTRODUCTION	
	South Dakota Statistical Summary 1988	2
II.	HISTORICAL TRENDS	
	Motor Vehicle Accidents	3
	Alcohol Involvement	6
	Restraint Usage	12
	Cycle and Pedestrian Accidents	13
	Holiday Counts	15
III.	1988 MOTOR VEHICLE ACCIDENT PROFILE	
	Introduction	17
	First Harmful Event	22
	Manner of Collision	23
	Highway System	24
	County Summary	26
	City Summary	26
	Roadway Surface Conditions	26
	Contributing Circumstances	26
	Accidents by Time of Day, Month, and Day of Week	32
	Drivers	36
	Motorcycles	43
	Pedestrians	46
	Bicycles	48
IV.	GLOSSARY OF TERMS	49

LIST OF FIGURES

FIGURE		PAGE
2-1	Fatality Rate Comparison	4
2-2	1988 Traffic Fatalities - Alcohol Related vs. Nonalcohol Related	7
2-3	1988 Traffic Injuries - Alcohol Related vs. Nonalcohol Related	7
2-4	Fatal and Injury Accidents and DWIs	9
2-5	Fatal Accidents 1979 - 1988	9
2-6	1988 Fatal and Injury Accident Levels	11
3-1	Fatalities by Travel Mode	19
3-2	Injuries by Travel Mode	19
3-3	1988 Traffic Accidents by Highway System Type	25
3-4	1988 Fatal Traffic Accidents by Highway System Type	25
3-5	Rural Fatal and Injury Accidents/Vehicle Miles Traveled	30
3-6	Accidents by Time of Day	35
3-7	Accidents by Month	35
3-8	Accidents by Day of Week	35
3-9	Drivers by Age Group - Fatal and Injury Accident-Involved Drivers	39
3-10	Young Drivers - Fatal and Injury Accident-Involved Drivers	40
3-11	Motorcyclists - Accident-Involved Motorcycle and Moped Drive ;	44

LIST OF TABLES

TABLE		PAGE
2-1	Fatality Rate Comparison	3
2-2	South Dakota Yearly Comparison of Motor Vehicle Traffic Fatalities, Injuries, Accidents, Miles Traveled, and Registered Motor Vehicles	5
2-3	Alcohol Involved Accidents as Percent of All Accidents	6
2-4	Accident and Arrest Activity	8
2-5	Comparison of Accident and Arrest Activity - Alcohol-Related vs. Nonalcohol-Related	10
2-6	Safety Restraint Usage Accident-Involved Drivers	12
2-7	Fatalities and Injuries to Motor Vehicle Occupants Under Five Years of Age	12
2-8	Motorcycle Accidents	13
2-9	Pedestrian Fatalities and Injuries	14
2-10	Bicycle Fatalities and Injuries	14
2-11	Accidents During Holidays	15-16
3-1	Fatalities and Severity of Injuries of Drivers, Passengers, Pedestrians, and Bicyclists	17
3-2	Fatalities and Injuries by Mode of Transportation	18
3-3	Vehicle Types Involved in Accidents	20
3-4	Fatalities and Injuries by Age Group	21
3-5	First Harmful Event	22
3-6	Manner of Collision for Accidents Involving a Collision Between Two or More Motor Vehicles	23
3-7	Accidents by Type of Highway	24
3-8	Reported Traffic Accidents - South Dakota Counties	27-28
3-9	Counties Having More Than Two Percent of the Rural Fatal and Injury Accidents	29
3-10	Traffic Accidents - South Dakota Cities Population 2500 and Over	31
3-11	Roadway Surface Conditions	32
3-12	Accidents by Time of Day	33
3-13	Accidents by Month	34
3-14	Accidents by Day of Week	34
3-15	Age of Drivers in Accidents	36
3-16	Age of Drinking Drivers in Accidents	37
3-17	Licensed Drivers and Fatal and Injury Accident-Involved Drivers by Age	38
3-18	Motor Vehicle Driver Contributing Circumstances	42
3-19	Motorcyclists by Age Group	43
3-20	Helmet Use by Motorcycle Drivers in Accidents	45
3-21	Age of Pedestrians in Traffic Accidents	46
3-22	Alcohol Involvement by Pedestrians	47
3-23	Rural vs. Urban Pedestrian Accidents	47
3-24	Age of Bicycle Drivers in Traffic Accidents	48

I. INTRODUCTION

The South Dakota Motor Vehicle Accident Summary was developed to provide an overview of the South Dakota traffic accident picture, as well as make frequently requested information available. Information from 1988 comprises the major portion of the book; however, basic historic trends are also provided for reference.

The Motor Vehicle Accident Summary is divided into two main sections, Historical Trends and 1988 Motor Vehicle Accident Profile. The Historical Trend section provides information on alcohol involvement in motor vehicle accidents and results of South Dakota's efforts to combat the drinking driver. This section also provides data on restraint usage and accident trends. The 1988 Accident Profile section details the accident picture for 1988 as well as a glossary of terms.

The majority of the information in this book is provided by the Accident Records Section within the Department of Transportation. Current state law requires an accident report be filed for each motor vehicle traffic accident resulting in the death or injury of a person, or property damage to an apparent extent of five hundred dollars or more to any one person's property or one thousand dollars accumulated damage per accident. Law enforcement agencies provide the accident reports to Accident Records. These reports are available to the public for a fee of two dollars.

Examples of reports available through Accident Records are:

STANDARD REPORTS - These reports provide the user with a standard set of summary information for a preselected subset of all accidents, e.g., all accidents involving a drinking driver.

PLOT MAPS - These maps supply the user with a graphic display on which the location of each accident in a given geographic area has been plotted on transparent paper and scaled to overlay maps provided by the Department of Transportation.

SPECIAL REQUESTS - Special requests are answered using several computer packages, one of which is an on-line query system which provides almost immediate response to requests of a very specific nature.

For additional information or copies, write or call:

Accident Records Section
118 West Capitol Avenue
Pierre, SD 57501-2080
Phone: (605) 773-3868

-OR-

Office of Highway Safety
118 West Capitol Avenue
Pierre, SD 57501-2080
Phone: (605) 773-3675

SOUTH DAKOTA
STATISTICAL SUMMARY

1988

NUMBER OF REPORTED MOTOR VEHICLE TRAFFIC ACCIDENTS: 14,821

AMOUNT OF MOTOR VEHICLE TRAFFIC ACCIDENT PROPERTY DAMAGE: $40 million

NUMBER OF MOTOR VEHICLE TRAFFIC ACCIDENT INJURIES: 6,579

NUMBER OF MOTOR VEHICLE TRAFFIC ACCIDENT FATALITIES: 147

ECONOMIC LOSS FROM MOTOR VEHICLE TRAFFIC ACCIDENTS: $117 million

PERCENT OF DRIVERS IN FATAL ACCIDENTS WHO HAD BEEN DRINKING: 41.1%

NUMBER KILLED IN ALCOHOL-RELATED ACCIDENTS: 70

NUMBER INJURED IN ALCOHOL-RELATED ACCIDENTS: 1,289

NUMBER OF PEDESTRIANS KILLED: 14

NUMBER OF MOTORCYCLISTS KILLED: 13

NUMBER OF BICYCLISTS KILLED: 2

PERCENT OF LICENSED DRIVERS UNDER 25: 19%

PERCENT OF ACCIDENT-INVOLVED SPEEDING DRIVERS UNDER 25: 54.5%

PERCENT OF ACCIDENT-INVOLVED DRINKING DRIVERS UNDER 25: 45.5%

PERCENT OF DRIVERS KILLED IN MOTOR VEHICLE ACCIDENTS NOT WEARING SEATBELTS (F.A.R.S): 89%

PERCENT OF SEATBELT USAGE BY TEENAGE DRIVERS KILLED IN MOTOR VEHICLE ACCIDENTS: 0%

NUMBER OF DWI CONVICTIONS: 5,919

SEATBELT USE RATE OF ACCIDENT-INVOLVED DRIVERS: 23.8%

NUMBER OF UNRESTRAINED CHILDREN UNDER 5 YEARS OF AGE KILLED IN MOTOR VEHICLE ACCIDENTS: 3

NUMBER OF PROPERLY RESTRAINED CHILDREN UNDER 5 YEARS OF AGE KILLED IN MOTOR VEHICLE ACCIDENTS: 0

AVERAGE TRAVEL SPEED ON SOUTH DAKOTA HIGHWAYS POSTED 55 MPH: 56.3 MPH

PERCENT OF MOTORISTS EXCEEDING 55 MPH ON POSTED 55 MPH HIGHWAYS: 47.2%

Source: Department of Transportation: Accident Records

II. HISTORICAL TRENDS

Motor Vehicle Accidents

The fatality rates per 100 million vehicle miles traveled from 1979-1988 for South Dakota, states surrounding South Dakota, and the nation are shown in TABLE 2-1. South Dakota's rate, the national rate, and the rate of those states bordering South Dakota have all shown a decline over the last ten years. FIGURE 2-1 compares South Dakota with the national rate and two comparable rural states, North Dakota and Wyoming.

TABLE 2-1
FATALITY RATE COMPARISON
1979-1988

State	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
South Dakota	3.8	4.2	3.2	2.7	2.7	2.2	2.0	2.0	1.9	2.0
Iowa	3.5	3.4	3.3	2.5	2.6	2.1	2.3	2.2	2.3	2.6
Minnesota	3.0	3.0	2.7	2.0	1.8	1.8	1.8	1.7	1.5	1.7
Montana	5.0	4.9	4.8	3.8	4.0	3.2	3.0	2.9	2.9	2.4
Nebraska	2.8	3.5	3.3	2.3	2.2	2.4	2.0	2.3	2.3	1.8
North Dakota	2.5	2.9	3.0	2.8	2.2	1.9	1.6	1.8	1.7	1.8
Wyoming	5.2	5.2	5.4	3.9	3.4	3.1	2.9	3.2	2.5	2.9
National	3.3	3.4	3.2	2.8	2.6	2.6	2.5	2.5	2.4	2.4

Note: Fatality Rate is the number of traffic fatalities per 100 million vehicle miles traveled.

Source: Department of Transportation: Accident Records

TABLE 2-2 provides a yearly comparison of South Dakota's motor vehicle traffic accidents from 1960 through 1988. Any comparison of motor vehicle accidents must be made with caution due to the changes in the definition of a reportable accident. For example, in the late 1970's the definition of a fatality caused by a motor vehicle accident was changed from the death occurring up to one year after the accident to death occurring within 30 days after the accident. Although this would not change the fact that the number and rate of fatalities has shown a steady decline, the decline in the last few years would not have been as much. There does not appear to be a single reason why there are fewer fatalities; however, the national 55 mph speed limit law initiated in 1974 and the increased efforts in the drinking driving area in 1981 have probably had the most impact. Other factors include improvements in the highways, safer vehicles, and traffic enforcement efforts. Also of importance is the fact that both the number of registered motor vehicles and the vehicle miles traveled continue to increase.

FIGURE 2-1 FATALITY RATE COMPARISON

1978 - 1988

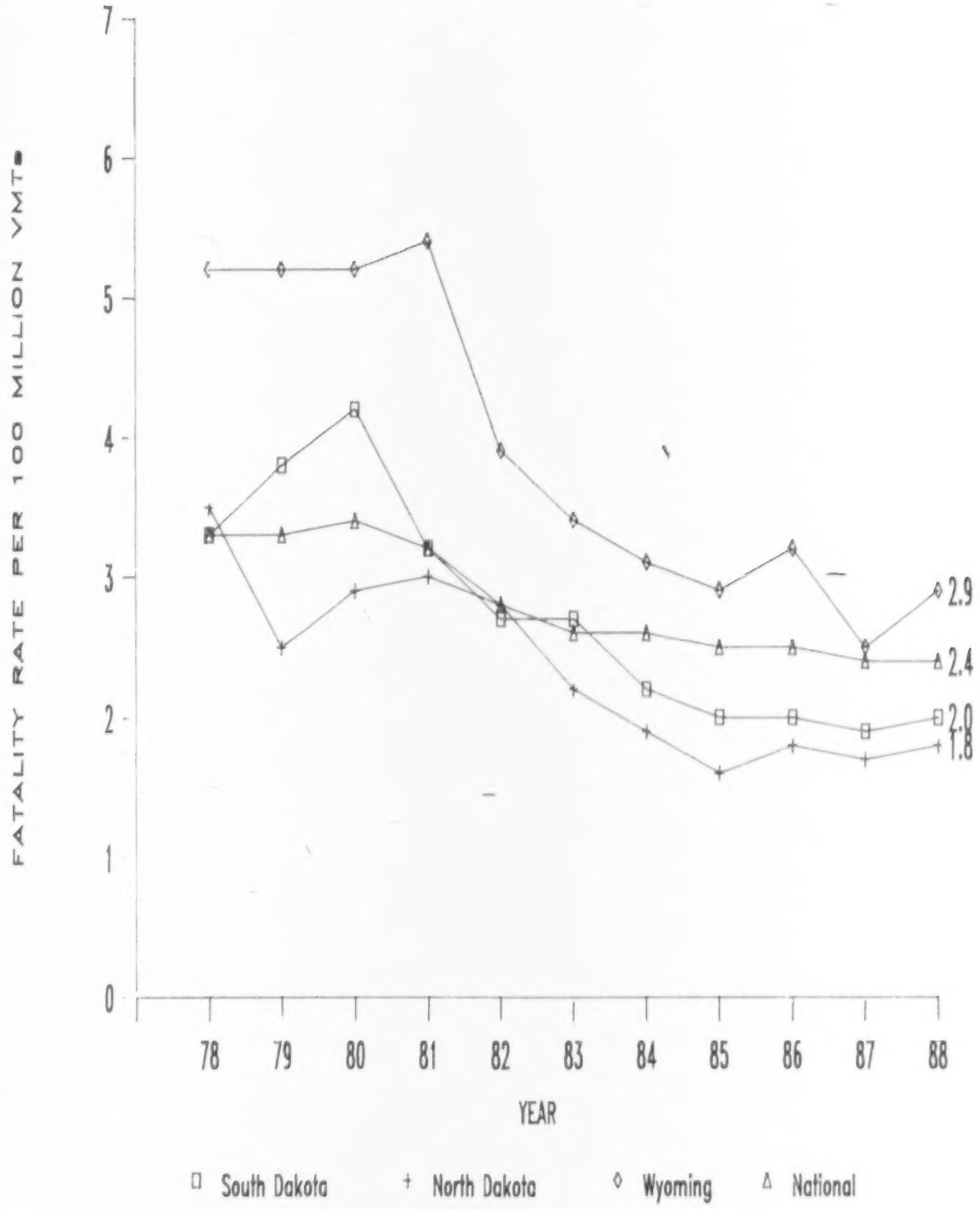


TABLE 2-2
SOUTH DAKOTA YEARLY COMPARISON
OF MOTOR VEHICLE TRAFFIC FATALITIES, INJURIES,
ACCIDENTS, MILES TRAVELED, & REGISTERED MOTOR VEHICLES

Year	Fatalities	Rate[1]	Injuries	Total Accd.	Fatal Accd.	Injury Accd.	PDO[2] Accd.	Miles[3] Traveled +(000,000)	Registered Motor Vehicles +(000)
1960	233	6.94	3,656	7,187	191	2,121	4,875	3,359	351
1961	228	6.75	3,848	7,281	184	2,313	4,784	3,379	361
1962	246	6.77	4,248	8,805	191	2,592	6,022	3,631	377
1963	220	5.83	4,123	8,874	185	2,530	6,159	3,776	386
1964	270	7.03	4,569	9,349	211	2,816	6,322	3,839	387
1965	244	6.13	4,685	10,015	194	2,880	6,941	3,983	396
1966	265	6.50	5,072	10,821	205	3,087	7,529	4,075	402
1967	224	5.41	5,286	12,154	183	3,250	8,721	4,142	407
1968	255	5.91	5,612	14,061	215	3,396	10,450	4,313	409
1969	296	6.79	5,921	16,565	219	3,584	12,762	4,361	422
1970	238	5.12	5,492	16,165	189	3,395	12,581	4,648	427
1971	262	5.36	6,705	16,995	210	4,152	12,633	4,884	444
1972	294	5.83	6,718	17,883	235	4,267	13,381[2]	5,039	467
1973	286	5.57	6,774	14,985	228	4,321	10,436[2]	5,136	494
1974	229	4.47	6,211	11,727	203	4,077	7,447[2]	5,126	519
1975	198	3.82	6,769	15,146	163	4,398	10,585[2]	5,186	533
1976	224	4.07	7,423	15,755	188	4,840	10,727	5,503	554
1977	211	3.67	7,603	18,020	180	5,013	12,827[2]	5,754	575
1978	194	3.33	7,861	18,085	168	5,263	12,654[2]	5,830	599
1979	211	3.76	7,189	16,059	169	4,826	11,064	5,614	616
1980	228	4.18	7,147	14,845	188	4,770	9,887	5,456	622
1981	177	3.17	6,771	14,375	162	4,614	9,599	5,582	637
1982	148	2.68	6,174	14,605	129	4,192	10,284	5,528[3]	640
1983	175	2.73	6,287	14,971	147	4,175	10,649	6,406	655
1984	143	2.24	6,158	15,093	132	4,297	10,664	6,394	669
1985	130	2.02	6,240	15,435	109	4,229	11,097[2]	6,443	674
1986	134	1.98	6,008	13,714	118	4,105	9,491	6,762	686
1987	134	1.87	6,221	13,083	107	4,173	8,803	7,171	711
1988	147	2.04	6,579	14,821	127	4,455	10,239	7,213	709

[1]Number of fatalities per 100 million vehicle miles traveled.

[2]Prior to July 1, 1973 the threshold for a reportable property damage only (PDO) accident was $100 to one person's property. July 1, 1973 the PDO amount was increased to $250.

January 1, 1975, the PDO threshold definition changed to accumulated property damage of $250 or more. July 1, 1978 the PDO threshold was increased to $400 accumulated property damage. July 1, 1986, the PDO threshold definition changed to $500 to any one person's property or $1000 accumulated property damage per accident.

[3]1983 the formula for computing VMTs was adjusted, resulting in an approximate 9.5% increase in annual VMTs.

Source: Department of Transportation: Accident Records

Alcohol Involvement

Alcohol continues to be a significant factor in motor vehicle accidents, especially the serious accidents involving death and injuries (see TABLE 2-3 and FIGURES 2-2 and 2-3). The 1988 fatal accidents exceeded 50 percent, while deaths remained below the 50 percent mark.

TABLE 2-3
ALCOHOL INVOLVED ACCIDENTS AS PERCENT OF ALL ACCIDENTS
1982-1988

	1982	1983	1984	1985	1986	1987	1988
Total Accidents	14.0	13.6	13.2	11.2	11.5	10.8	10.6
	(2044)	(2029)	(1993)	(1728)	(1577)	(1416)	(1566)
Fatal Accidents	59.7	49.0	53.8	51.4	54.2	48.6	50.4
	(77)	(72)	(71)	(56)	(64)	(52)	(64)
Injury Accidents	22.2	22.4	20.8	19.2	18.7	17.5	18.1
	(930)	(935)	(894)	(810)	(769)	(731)	(808)
PDO Accidents	10.1	9.6	9.6	7.8	7.8	7.2	6.8
	(1037)	(1022)	(1028)	(862)	(744)	(633)	(694)
Fatalities	58.1	50.9	53.1	53.1	55.2	49.3	47.6
	(86)	(89)	(76)	(69)	(74)	(66)	(70)
Injuries	23.5	24.3	22.3	20.5	20.2	19.0	19.6
	(1453)	(1528)	(1371)	(1280)	(1214)	(1183)	(1289)

NOTE: 1982: Alcohol involvement for PDO and Injury Accidents is based on an indication of alcohol use as reported by the investigating officer.

Alcohol involvement for Fatal Accidents is based upon a positive BAC result and/or indication of alcohol use as reported by the investigating officer.

1983-1988: Fatal, Injury and Property Damage Accidents - At least one driver, pedestrian or bicycle driver had been drinking in the opinion of the investigating officer.

Source: Department of Transportation: Accident Records

FIGURE 2-2 1988 TRAFFIC FATALITIES

Alcohol Related vs Non Alcohol Related

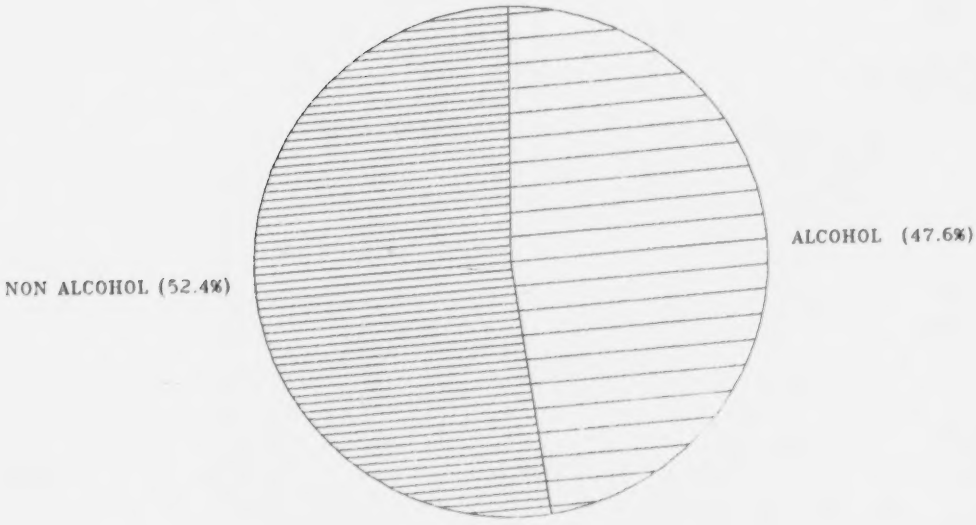
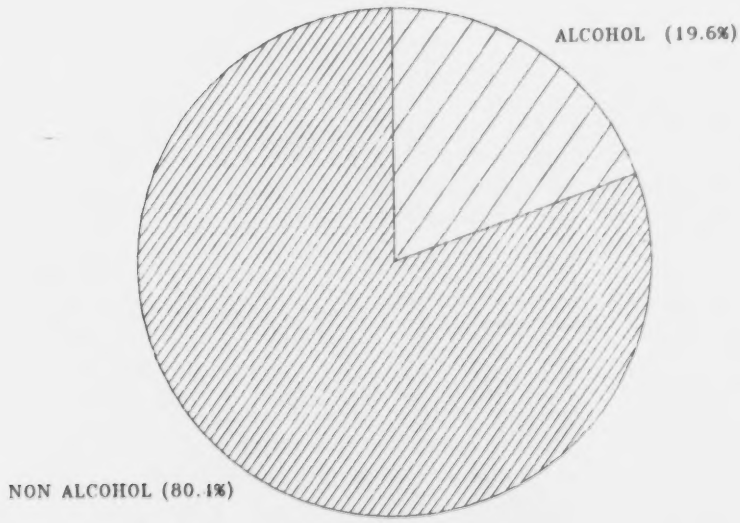


FIGURE 2-3 1988 TRAFFIC INJURIES

Alcohol Related vs Non Alcohol Related



The State of South Dakota initiated a statewide effort during 1981 to increase the DWI enforcement and public awareness efforts. The numbers of persons killed and injured in alcohol-related accidents have declined since 1981. The following accident and arrest data is presented to quantify the reduction of alcohol-related fatal and injury accidents and to compare that reduction to the nonalcohol-related accident experience (see TABLE 2-4).

TABLE 2-4
ACCIDENT AND ARREST ACTIVITY
1979 - 1988

	FATAL ACCIDENTS		FATAL & INJURY ACCIDENTS		
	ALCOHOL RELATED	NONALCOHOL RELATED	ALCOHOL RELATED	NONALCOHOL RELATED	DWI ARRESTS
1979	94	75	1216	3779	4136
1980	105	83	1391	3567	4151
1981	100	62	1366	3410	5068
1982	77	52	1007	3314	6842
1983	72	75	1007	3315	9840
1984	71	61	965	3464	9972
1985	56	53	866	3472	9363
1986	64	54	833	3390	9485*
1987	52	55	783	3497	8369*
1988	64	63	872	3710	7123

*Delayed Chemical Test Data was added to file.

Source: Department of Transportation: Accident Records

FIGURE 2-4 presents the annual counts of DWI arrests, alcohol-related fatal and injury accidents, and nonalcohol-related fatal and injury accidents for 1979 to 1988. FIGURE 2-5 presents the alcohol-related and nonalcohol-related fatal accident experience.

To facilitate comparison of 1988 accident and arrest experience, a baseline three-year average (1979-81) and the previous three-year average (1985-87) are presented in TABLE 2-5. Additionally, TABLE 2-5 includes the percentage change in 1988 accident and arrest levels from the baseline three-year average, the previous three-year average, and the prior year. See Figure 2-6 for a graphic comparison of the percentage change of the 1988 levels.

There were 64 alcohol-related fatal accidents during 1988, which compares to 52 in 1987. The previous three-year average was 57 and the baseline average was 100. Alcohol-related fatal accidents were down 36 percent when compared to the baseline three-year average, while nonalcohol-related fatal accidents declined 14 percent during the same period.

There were 872 alcohol-related fatal and injury accidents during 1988, which compares to 783 in 1987. The previous three-year average was 827 or a five percent increase in 1988. Nonalcohol-related fatal and injury accidents in 1988 increased seven percent from the previous three-year average.

There were an estimated 7,123 DWI arrests in 1988. This level is down (21%) from the previous three-year average, but up 60 percent from the baseline period (1979-1981).

FIGURE 2-4 F&I ACCIDENTS AND DWIs

1979 - 1988

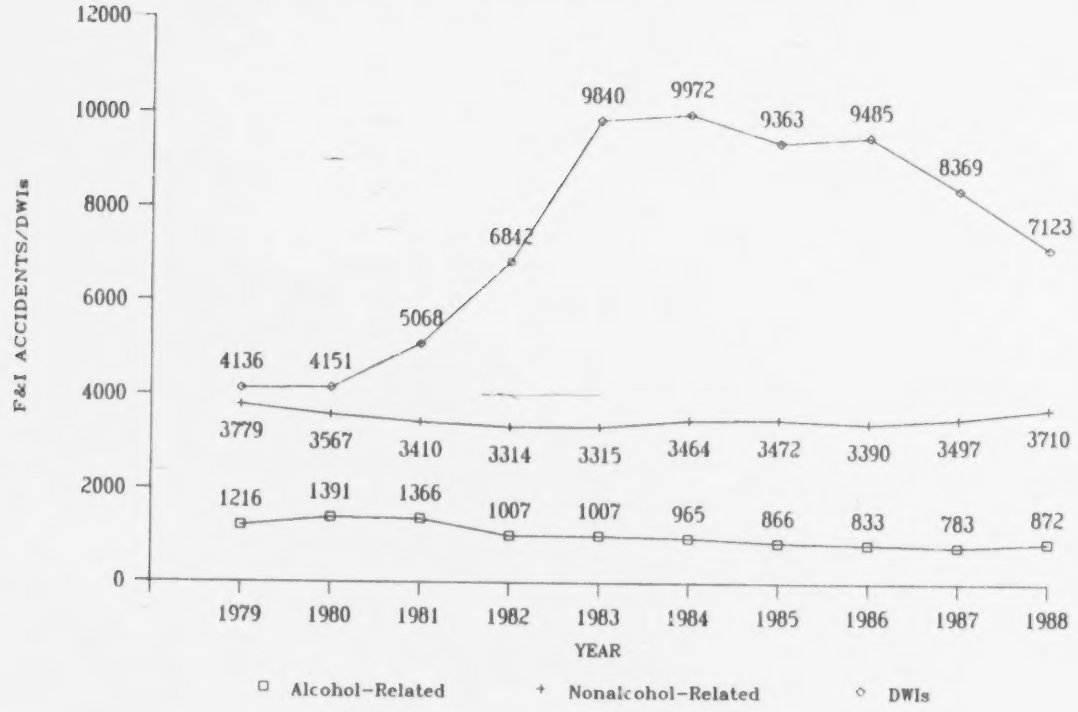


FIGURE 2-5 FATAL ACCIDENTS

1979 - 1988

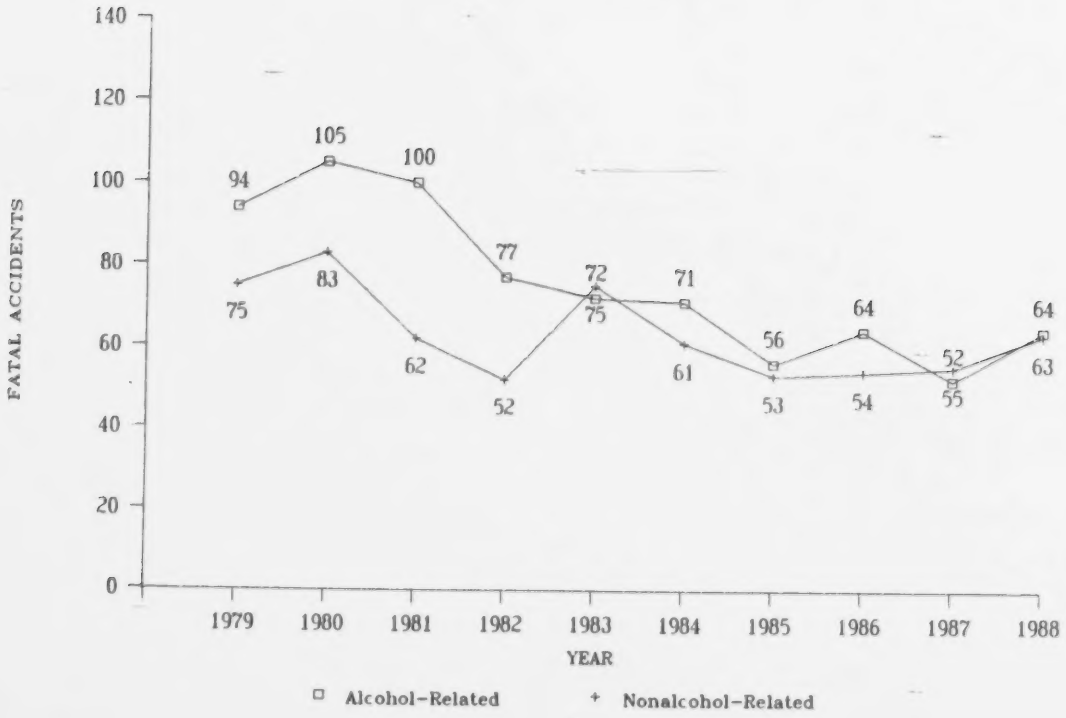


TABLE 2-5
COMPARISION OF ACCIDENT AND ARREST ACTIVITY
(1979 - 1988)

	Baseline 3-Yr. Avg. (1979-81)	Previous 3-Yr. Avg. (1985-87)	1987	1988	PERCENTAGE CHANGE OF 1988 LEVELS COMPARED TO: Baseline 3-Yr. Avg. (1979-81)	Previous 3-Yr. Avg. (1985-87)	1987
Fatal Accidents							
Alcohol-Related	99.7	57.3	52	64	-36%	+12%	+23%
Nonalcohol-Related	73.3	54.0	55	63	-14%	+17%	+15%
Fatal & Injury Accidents							
Alcohol-Related	1324.3	827.3	783	872	-34%	+5%	+11%
Nonalcohol-Related	3585.3	3453.0	3497	3710	+3%	+7%	+6%
DWI's	4451.7	9072.3	8369	7123	+60%	-21%	-15%

FIGURE 2-6 1988 F&I ACCIDENT LEVEL

COMPARED TO 1979 - 1987 LEVELS

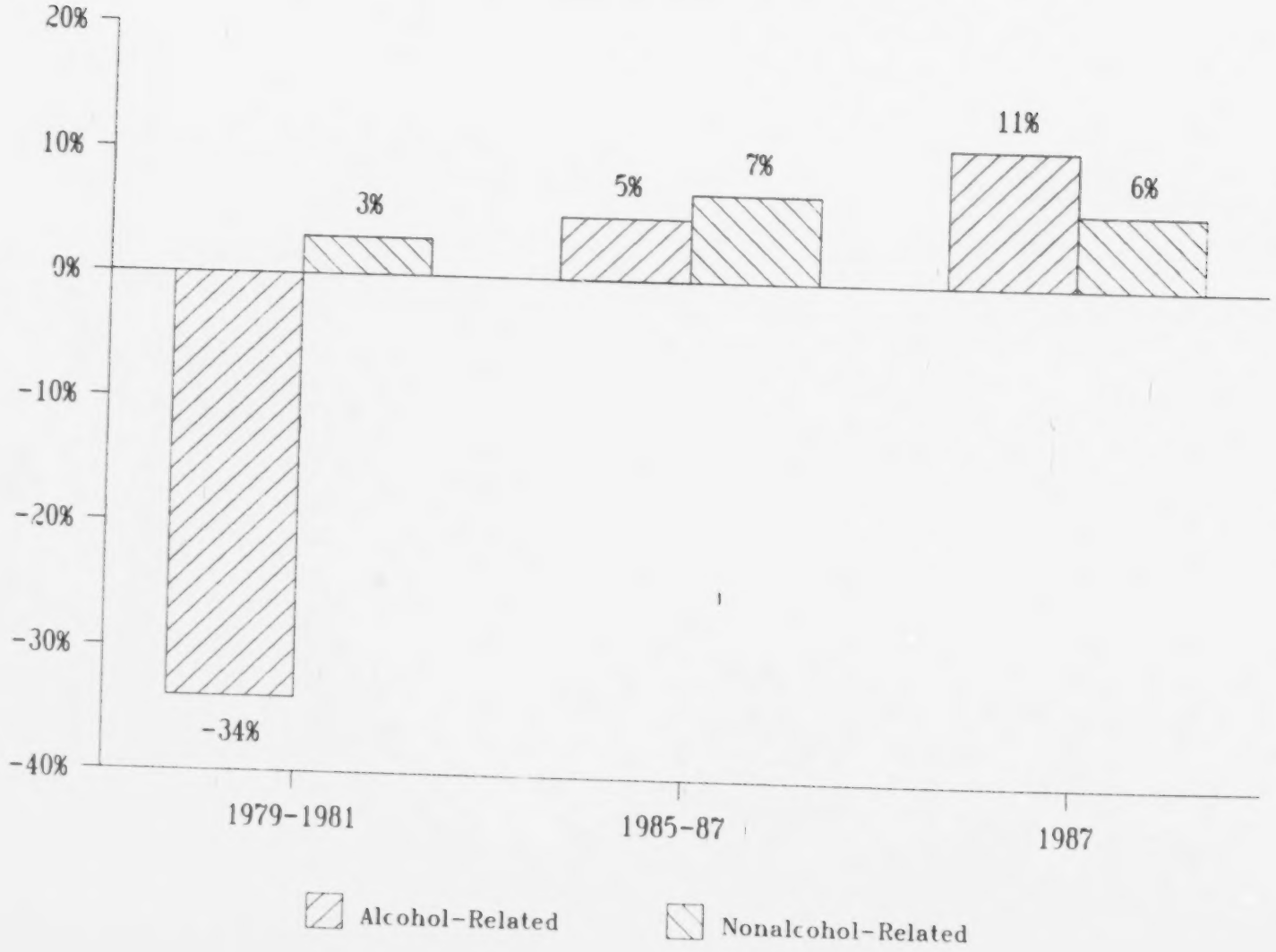


TABLE 2-6
SAFETY RESTRAINT USAGE
ACCIDENT-INVOLVED DRIVERS
1984 - 1988

DRIVER AGE	USAGE RATE 1984	1985	1986	1987	1988
14-15	4.6%	4.2%	7.6%	8.5%	12.7%
16-17	3.7%	4.8%	6.8%	9.3%	10.4%
18-20	5.0%	7.0%	9.9%	14.1%	16.3%
21-24	7.7%	10.9%	13.4%	19.0%	24.2%
25-34	12.1%	14.3%	17.8%	22.9%	28.2%
35-44	11.7%	14.4%	18.6%	26.4%	29.7%
45-54	11.1%	13.1%	17.4%	24.0%	28.7%
55-64	10.1%	12.2%	17.2%	22.7%	29.1%
65-Over	8.4%	9.7%	14.5%	19.5%	23.2%
Total	8.9% (1805)	11.1% (2363)	14.6% (2718)	19.6% (3482)	23.8% (4819)

Source: Department of Transportation: Accident Records

The increased usage of safety restraints by accident-involved drivers is an indicator that usage is increasing in South Dakota across all age groups.

Motor vehicle occupants from birth through four years of age accounted for three fatalities during 1988, which compares to three fatalities in 1987 and the previous three-year average of 3.7 (see TABLE 2-7). None of the children killed were restrained.

There were 151 children (birth through 4 years) injured in 1988, which compares to 146 in 1987 and the three-year average of 130.

TABLE 2-7
FATALITIES & INJURIES TO MOTOR VEHICLE OCCUPANTS
UNDER 5 YEARS OF AGE

YEAR	FATALITIES	SERIOUS INJURY	SLIGHT INJURY	TOTAL NONFATAL INJURIES
1981	0	107	44	151
1982	3	85	47	132
1983	5	86	63	149
1984	3	78	61	139
1985	4	74	50	124
1986	4	70	51	121
1987	3	87	59	146
1988	3	101	50	151

NOTE: Table includes passengers of Motor vehicles normally equipped with safety restraints.

Source: Department of Transportation: Accident Records

Cycle and Pedestrian Accidents

The following tables provide a yearly comparison of South Dakota's motorcycle, pedestrian, and bicycle accidents, injuries, and fatalities from 1970 through 1988. Moped accidents are included with motorcycle accidents. Over the years only one fatal moped accident has been recorded in South Dakota, and the number of injuries is small. See pages 43-48 for additional motorcycle, pedestrian, and bicycle accident information.

TABLE 2-8
MOTORCYCLE ACCIDENTS
1970 - 1988

Year	Motorcycle Accidents Total	Fatal	Injury	Motorcyclists Fatalities	Injuries	Registered Motorcycles	Licensed Motorcyclists
1970	217	8		8	211	11,964	
1971	336	11		13	342	13,865	
1972	314	6		8	312	16,605	
1973	395	13		14	425	19,737	
1974	344	8		9	372	22,964	
1975	377	14	321	14	388	23,980	
1976	465	9	402	9	501	25,058	
1977	495	17	419	19	529	26,560	
1978	523	14	456	14	560	27,590	34,225
1979	597	21	522	22	664	31,102	37,286
1980	707	17	608	18	763	35,045	41,431
1981	697	15	598	15	729	38,265	43,170
1982	548	12	473	13	581	38,418	Not Available
1983	573	12	489	12	591	39,255	45,544
1984	564	10	488	10	567	38,956	45,763
1985	551	14	469	15	569	37,905	45,805
1986	475	10	405	10	492	36,036	45,210
1987	399	13	347	14	417	33,800	44,956
1988	424	13	371	13	441	31,421	44,058

Source: Department of Transportation: Accident Records

TABLE 2-9
PEDESTRIAN FATALITIES AND INJURIES
1970 - 1988

Year	Fatalities	Injuries
1970	17	158
1971	15	170
1972	30	199
1973	21	161
1974	25	158
1975	11	179
1976	24	158
1977	21	164
1978	15	185
1979	16	167
1980	21	162
1981	20	130
1982	16	146
1983	20	139
1984	14	139
1985	8	136
1986	15	165
1987	7	126
1988	14	149

Source: Department of Transportation: Accident Records

TABLE 2-10
BICYCLE FATALITIES AND INJURIES
1970 - 1988

Year	Fatalities	Injuries
1970	3	67
1971	4	90
1972	2	94
1973	4	82
1974	2	115
1975	1	108
1976	3	99
1977	7	89
1978	3	82
1979	4	96
1980	0	78
1981	0	83
1982	1	93
1983	1	99
1984	4	95
1985	3	119
1986	1	115
1987	1	157
1988	2	137

Source: Department of Transportation: Accident Records

Holiday Counts

TABLE 2-11 provides a yearly comparison of South Dakota motor vehicle accident experience during major holiday observances. These counts are frequently requested and reported.

TABLE 2-11
ACCIDENTS DURING HOLIDAYS
1976 - 1988

Holiday	Total Hours	Total Accd.	Fatal Accd.	Injury Accd.	Fatalities	Injuries
MEMORIAL DAY*						
1976	78	135	1	47	1	74
1977	78	147	1	46	1	75
1978	78	146	1	54	1	84
1979	78	144	3	60	3	91
1980	78	128	5	46	12	71
1981	78	129	3	48	3	65
1982	78	129	2	45	2	75
1983	78	119	4	43	4	77
1984	78	110	0	36	0	54
1985	78	124	3	44	3	65
1986	78	142	3	37	3	56
1987	78	97	1	28	1	47
1988	78	127	2	36	2	68
FOURTH OF JULY						
1976	78	175	3	51	3	79
1977	78	169	5	70	6	115
1978	102	241	2	108	3	171
1979	30	60	0	27	0	40
1980	78	166	3	56	3	86
1981	78	174	2	63	2	97
1982	78	160	1	64	1	106
1983	78	136	1	46	1	82
1984	30	61	1	22	1	33
1985	102	170	1	58	1	93
1986	78	109	4	47	4	94
1987	78	124	1	53	4	74
1988	78	138	2	48	2	74
LABOR DAY						
1976	78	181	4	68	4	93
1977	78	179	3	70	3	108
1978	78	150	2	66	2	112
1979	78	140	1	55	1	83
1980	78	108	2	35	2	65
1981	78	149	2	68	2	105
1982	78	134	1	62	1	100

*Nationally Observed

Holiday	Total Hours	Total Accd.	Fatal Accd.	Injury Accd.	Fatalities	Injuries
LABOR DAY (cont'd)						
1983	78	132	5	48	6	71
1984	78	111	3	42	3	64
1985	78	127	3	40	3	63
1986	78	106	1	34	1	62
1987	78	135	2	44	3	73
1988	78	131	1	45	1	94
THANKSGIVING						
1976	102	228	2	56	2	96
1977	102	278	0	66	0	95
1978	102	316	2	76	2	122
1979	102	223	3	48	3	67
1980	102	192	3	63	8	94
1981	102	197	0	39	0	54
1982	102	184	2	47	2	67
1983	102	210	2	44	3	71
1984	102	194	2	56	2	83
1985	102	272	0	51	0	76
1986	102	162	3	37	3	63
1987	102	255	2	56	3	91
1988	102	224	1	42	1	70
CHRISTMAS						
1976	78	116	5	37	10	71
1977	78	206	1	58	4	89
1978	78	149	1	40	1	66
1979	102	162	4	53	4	80
1980	102	222	3	58	3	92
1981	78	103	3	21	3	42
1982	78	198	1	42	1	72
1983	78	155	0	30	0	47
1984	102	195	0	35	0	52
1985	54	97	1	13	2	25
1986	102	88	1	28	1	51
1987	102	209	1	63	2	108
1988	78	153	1	38	1	57
NEW YEARS						
1976-77	78	197	2	43	2	56
1977-78	78	254	4	61	4	94
1978-79	78	139	1	34	1	44
1979-80	102	204	3	62	5	91
1980-81	102	169	1	58	1	106
1981-82	78	147	1	32	1	42
1982-83	78	137	2	29	2	39
1983-84	78	166	0	41	0	59
1984-85	102	132	2	24	2	39
1985-86	54	98	1	19	1	27
1986-87	102	138	1	30	1	49
1987-88	102	151	0	33	0	43
1988-89	78	103	2	23	2	40

Source: Department of Transportation: Accident Records

III. 1988 MOTOR VEHICLE ACCIDENT PROFILE

Introduction

This section profiles the reported motor vehicle traffic accidents for 1988. Information will be given on where the accidents are occurring, when accidents happen, who is involved, and factors that contribute to accidents or why they are occurring. **Column percentages may not total 100 percent due to rounding error.**

During 1988, there were 14,821 reported motor vehicle traffic accidents, the majority of accidents being property damage only 10,239 (69%). Injury accidents accounted for 4,455 (30%) of the accidents, while 127 (1%) were fatal accidents. There were 6,579 persons injured and 147 persons killed in accidents during 1988 (see TABLE 3-1).

TABLE 3-1
FATALITIES AND SEVERITY OF INJURIES OF DRIVERS,
PASSENGERS, PEDESTRIANS, AND BICYCLISTS
1988

	Incapac. Injuries		Nonincapac. Injuries		Possible Injuries		Total Nonfatal Injuries		Total Fatalities	
	No.	%	No.	%	No.	%	No.	%	No.	%
Drivers	786	60.1	1,720	61.0	1,685	68.7	4,191	63.7	82	55.8
Passengers	433	33.1	961	34.1	711	29.0	2,105	32.0	49	33.3
Pedestrians	60	4.6	58	2.1	31	1.3	149	2.3	14	9.5
Bicycle Dr.	28	2.1	79	2.8	27	1.1	134	2.0	2	1.4
Total	1,307	100	2,818	100	2,454	100	6,579	100	147	100

Note: Incapacitating - severe lacerations, broken limbs or unable to leave the scene of the accident without assistance.

Nonincapacitating - minor lacerations, lumps on the head, abrasions and bruises.

Possible - momentary unconsciousness, limping, nausea, or complaint of pain.

Source: Department of Transportation: Accident Records

TABLE 3-2 provides information on persons killed and injured by method or mode of transportation. During 1988, 49 percent of the fatalities and nearly two-thirds of the injuries occurred to occupants of passenger cars. Occupants of pickups and vans accounted for over one-fourth of the fatalities. Additionally, in 1988 14 pedestrians, 13 motorcyclists, two bicyclists, and one motorized wheelchair occupant were killed (see FIGURES 3-1 and 3-2).

TABLE 3-2
FATALITIES AND INJURIES BY MODE OF TRANSPORTATION
1988

	Fatalities		Injuries	
	No.	%	No.	%
Passenger Cars	72	49.0	4,210	64.0
Pickups, Vans	41	27.9	1,446	22.0
Pedestrians	14	9.5	149	2.3
Motorcycle, Moped	13	8.8	441	6.7
Trucks (All)	3	2.0	148	2.2
Bicycle	2	1.4	137	2.1
Farm Machinery	1	0.7	8	0.1
Other	1	0.7	40	0.6
Total	147	100	6,579	100

Note: Other Includes Bus, Motor Home, Heavy Equipment, Other Type Motor Vehicles.

Source: Department of Transportation: Accident Records

FIGURE 3-1 FATALITIES BY TRAVEL MODE

1988

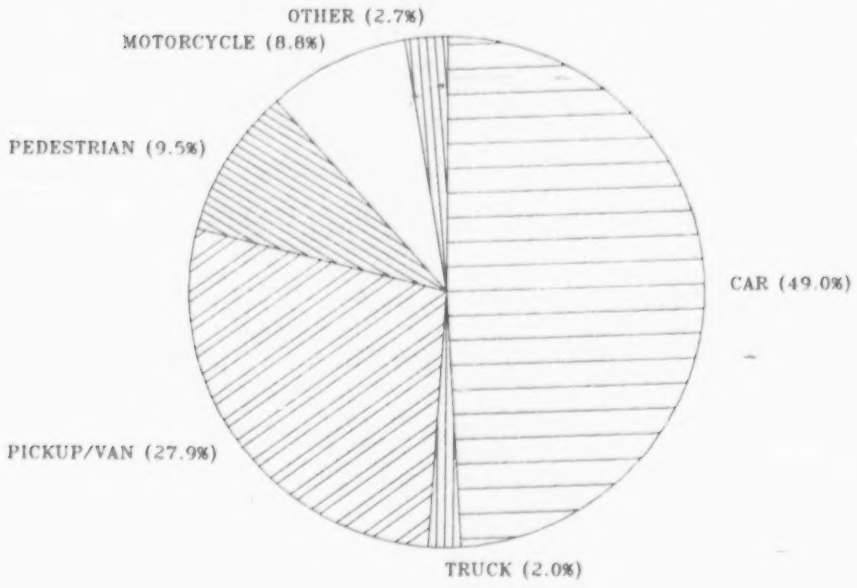


FIGURE 3-2 INJURIES BY TRAVEL MODE

1988

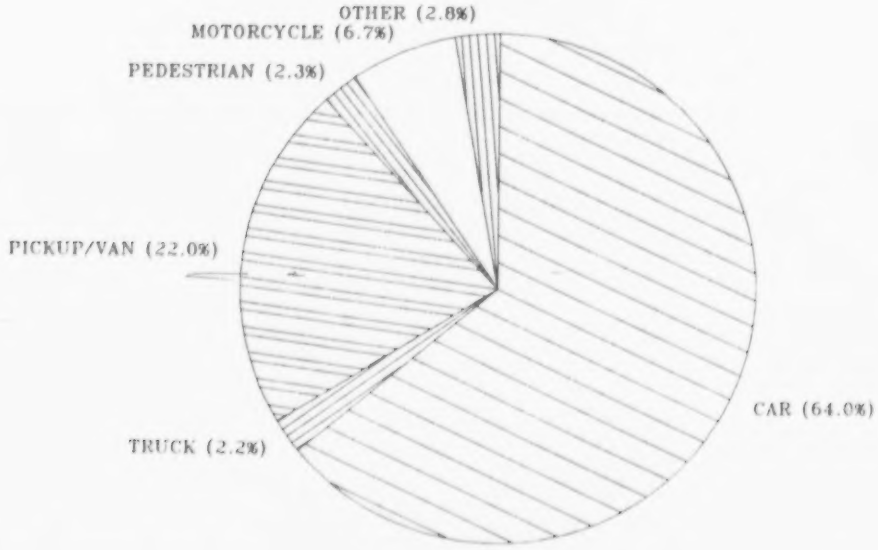


TABLE 3-3 provides information on all accident-involved vehicles by type. Trucks were involved in 13 or 7.6 percent of the vehicles involved in fatal accidents, but truck occupants (see TABLE 3-2 Mode of Transportation) makeup two percent or three of the persons killed. Passenger cars made up over half of the vehicles involved in fatal accidents and nearly two-thirds of those involved in injury accidents.

TABLE 3-3
VEHICLE TYPES INVOLVED IN ACCIDENTS
1988

	All Accidents		Fatal Accidents		Injury Accidents		PDO Accidents	
	No.	%	No.	%	No.	%	No.	%
Passenger Cars	16,027	65.9	86	50.6	4,846	65.7	11,095	66.1
Pickups, Vans	6,628	27.3	53	31.2	1,783	24.2	4,792	28.6
Trucks	920	3.8	13	7.6	294	4.0	613	3.7
Motorcycle	436	1.8	13	7.6	385	5.2	38	0.2
Farm Machinery or Heavy Equipment	81	0.3	1	0.6	26	0.4	54	0.3
Bus	44	0.2	0	0.0	7	0.1	37	0.2
Motor Home	44	0.2	0	0.0	8	0.1	36	0.2
Moped	5	0.0	0	0.0	5	0.1	0	0.0
Snowmobile	4	0.0	1	0.6	2	0.0	1	0.0
Other or Unknown	133	0.5	3	1.8	23	0.3	107	0.6
Total	24,322	100	170	100	7,379	100	16,773	100

Source: Department of Transportation: Accident Records

TABLE 3-4 provides information on the ages of persons killed and injured. Fifty-five percent of the persons killed were under 30. The ages of 19 and 23 each totalled seven deaths. These two age groups accounted for more deaths than any other single age. The average age of those killed was 35. See the Drivers Section beginning on Page 36 for additional information.

TABLE 3-4
FATALITIES AND INJURIES
BY AGE GROUP
1988

	Fatalities		Injuries	
	No.	%	No.	%
0 - 5	6	4.1	232	3.5
6 - 13	5	3.4	408	6.2
14 - 15	8	5.4	303	4.6
16 - 18	11	7.5	1,077	16.4
19 - 20	12	8.2	542	8.2
21 - 24	18	12.2	693	10.5
25 - 34	29	19.7	1,273	19.3
35 - 44	16	10.9	759	11.5
45 - 54	11	7.5	379	5.8
55 - 64	13	8.8	356	5.4
65-Over	18	12.2	491	7.5
Unknown	0	0	66	1.0
	147	100	6,579	100

NOTE: Revised table to group 19 and 20 year old deaths.

Source: Department of Transportation: Accident Records

First Harmful Event

The initial incident which causes injury or damage is referred to as the first harmful event. A motor vehicle collision with a fixed object represented 28 percent of the fatal accidents and only 16 percent of the total accidents (see TABLE 3-5).

TABLE 3-5
FIRST HARMFUL EVENT
1988

First Harmful Event	Total Accidents No.	%	Fatal Accidents No.	%	Injury Accidents No.	%	PDO Accidents No.	%
Motor Vehicle Collision With:								
Another MV (Not Parked)	7,804	52.7	35	27.6	2,418	54.3	5,351	52.3
A Fixed or Other Object	2,330	15.7	36	28.3	779	17.5	1,515	14.8
An Animal	1,786	12.1	1	0.8	62	1.4	1,723	16.8
A Parked Motor Vehicle	924	6.2	3	2.4	140	3.1	781	7.6
A Pedestrian	141	1.0	12	9.4	129	2.9	0	0.0
A Bicyclist	135	0.9	2	1.6	133	3.0	0	0.0
A Railroad Vehicle	22	0.1	0	0.0	13	0.3	9	0.1
Non-Collision (Overturning or Other)	1,679	11.3	38	29.9	781	17.5	860	8.4
Total	14,821	100	127	100	4,455	100	10,239	100

Source: Department of Transportation: Accident Records

Manner of Collision

The most common type or manner of collision between two or more vehicles is an angle collision which usually occur at an intersection. Angle collisions constitute 22.9 percent of the fatal collisions, 34.0 percent of the injury collisions, and 30.7 percent of the property damage only collisions. Rear-end collisions are second in prevalence accounting for 34.0 percent of the injury collisions and 25.1 percent of the property damage collisions. Head-on collisions are over represented in fatal accidents where they account for 45.7 percent of the collisions as compared to only four percent of the total collisions (see TABLE 3-6).

TABLE 3-6
MANNER OF COLLISION FOR ACCIDENTS INVOLVING A COLLISION
BETWEEN TWO OR MORE MOTOR VEHICLES
1988

Manner of Collision	Total Accidents No.	%	Fatal Accidents No.	%	Injury Accidents No.	%	PDO Accidents No.	%
Rear-End	2,169	27.8	4	11.4	821	34.0	1,344	25.1
Head-On	313	4.0	16	45.7	143	5.9	154	2.9
Angle	2,471	31.7	8	22.9	822	34.0	1,641	30.7
Sideswipe-Same Direction	632	8.1	1	2.9	107	4.4	524	9.8
Sideswipe-Opposite Dir.	170	2.2	0	0.0	32	1.3	138	2.6
Turning Movement	1,658	21.2	6	17.1	470	19.4	1,182	22.1
Backing Movement	391	5.0	0	0.0	23	1.0	368	6.9
Total	7,804	100	35	100	2,418	100	5,351	100

Source: Department of Transportation: Accident Records

Highway System

The number of reported accidents by highway system is presented in TABLE 3-7. Injury and PDO accidents happened predominately within city limits. City streets and alleys experienced 35 percent of the PDO accidents and 33 percent of the injury accidents.

Sixty-nine percent of the fatal accidents occurred on noninterstate rural highways with 37 fatal accidents on U.S./State highways and 50 on County/Local roads. The Interstate system experiences less than ten percent of the total accidents while accounting for 20 percent of the vehicle miles traveled in 1988 (see FIGURES 3-3 and 3-4).

TABLE 3-7
ACCIDENTS BY TYPE OF HIGHWAY
1988

Type of Highway	Total Accidents Number	%	Fatal Accidents Number	%	Injury Accidents Number	%	PDO Accidents Number	%
Interstate	1,352	9.1	23	18.1	343	7.7	986	9.6
US/State Hwys.-Rural	2,585	17.4	37	29.1	744	16.7	1,804	17.6
Co./Local Rds.-Rural	2,656	17.9	50	39.4	855	19.2	1,751	17.1
US/State Hwys.-City	3,149	21.2	9	7.1	1,045	23.5	2,095	20.5
City Streets/Alleys	5,079	34.3	8	6.3	1,468	32.9	3,603	35.2
Total	14,821	100	127	100	4,455	100	10,239	100

Source: Department of Transportation: Accident Records

FIGURE 3-3 1988 TRAFFIC ACCIDENTS

By Highway System Type

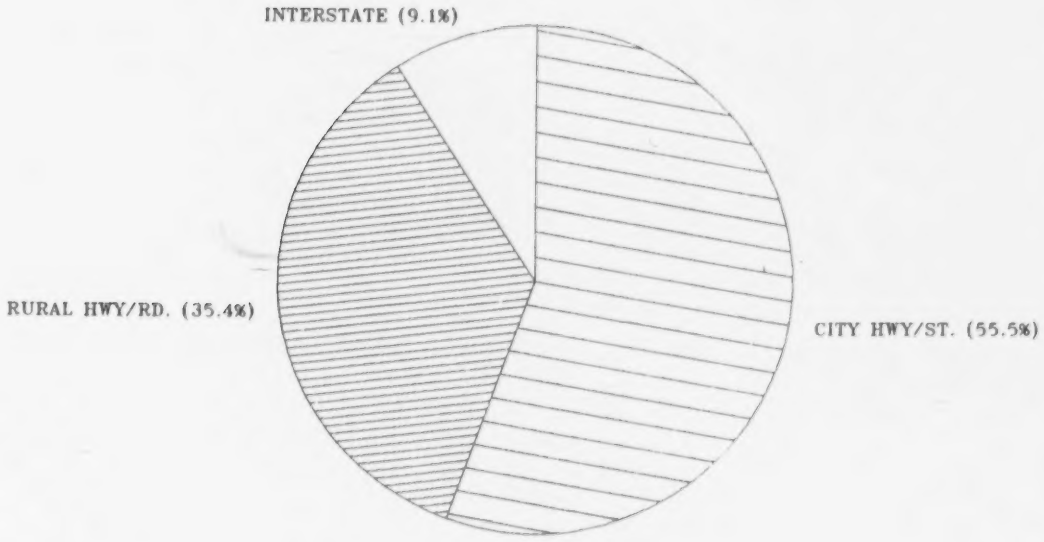
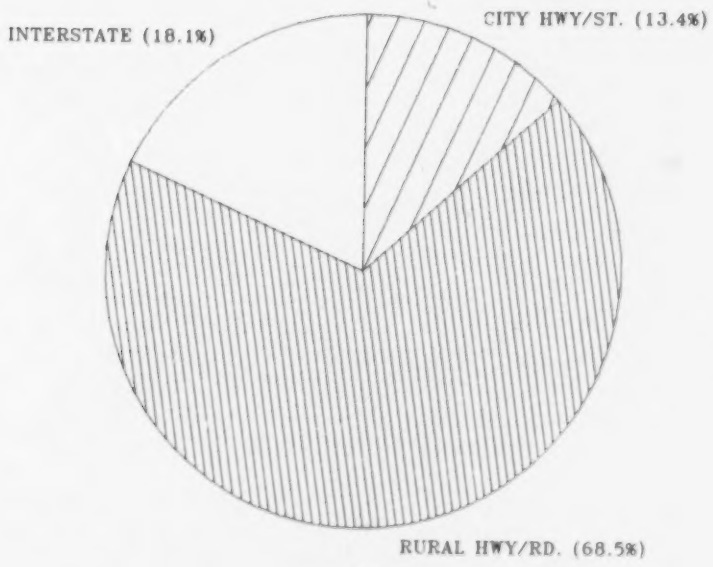


FIGURE 3-4 1988 FATAL TRAFFIC ACCIDENTS

By Highway System Type



County Summary

TABLE 3-8 provides a summary of all reported accidents by county in South Dakota.

Rural fatal and injury accidents occurred predominately in eleven counties (see TABLE 3-9). Each of these counties reported at least two percent of all rural fatal and injury accidents. The eleven accounted for 53.7 percent of rural fatal and injury accidents and 23.3 percent of all fatal and injury accidents in South Dakota. Pennington County had 10.8 percent of all rural fatal and injury accidents with Minnehaha and Lawrence counties accounting for 8.2 and 6.5 percent, respectively. FIGURE 3-5 presents the percentage involvement of rural fatal and injury accidents and compares this to the percentage of rural vehicle miles traveled in these counties. The most current figures available for rural VMTs by county are from 1986.

City Summary

Reported traffic accidents within South Dakota's cities (population of 2,500 and more) are presented in TABLE 3-10. These cities reported over half of the statewide injury accidents and 13 percent of the fatal accidents. The two largest cities (Sioux Falls, Rapid City) accounted for 60 percent of fatal and injury accidents and 52 percent of the property damage only accidents that occurred in cities with populations of 2,500 or more.

Roadway Surface Conditions

The majority of the accidents occurred on dry roads, including fatal and injury accidents (see TABLE 3-11). Combining similar "bad" road conditions, ice, snow, frost, and slush accounts for 25.1 percent of all reported property damage accidents and 16.4 percent of all fatal and injury accidents. Over 75 percent of all fatal and injury accidents occurred on dry roads.

Contributing Circumstances (Vision Obscurement and Other)

Contributing circumstances at the accident level involve two categories: vision obscurement and other. The reporting officer may include one, two, or no contributing circumstances for each category. Vision obscurement refers to conditions such as: fog or smoke, blowing soil, dirt or sand, rain, snow, sleet or hail, windshield or window obscured, glare from sun or lights, trees or other vegetation, snowbank, etc. Vision obscurement as a contributing circumstance was indicated in 21.5 percent of all accidents with two separate vision obscurements being reported in less than three percent of all accidents. Rain, snow, sleet or hail was the most frequently reported vision obscurement and was indicated as a problem in 5.2 percent of all accidents.

Contributing Circumstances - Other - was reported in 35.7 percent of all accidents with two Contributing Circumstances-Other being reported in 3.4 percent of all accidents. These contributing circumstances include wind conditions, slippery surface, road shoulder conditions, objects or animals in the road, phantom vehicle, pedestrians, bicyclists, road construction conditions, rough roads, and faulty or missing traffic control devices. The most common condition reported was slippery surface, and it was reported as a factor in 20 percent of all accidents.

TABLE 3-8
REPORTED TRAFFIC ACCIDENTS
SOUTH DAKOTA COUNTIES
1988

County	Total Accd.	Fatal Accd.	Injury Accd.	PDO Accd	Fatalities	Injuries
AURORA	89	1	31	57	1	41
BEADLE	418	1	140	277	1	201
BENNETT	12	0	2	10	0	5
BON HOMME	86	0	27	59	0	33
BROOKINGS	502	3	142	357	4	209
BROWN	882	0	260	622	0	371
BRULE	128	2	29	97	2	40
BUFFALO	8	2	3	3	2	8
BUTTE	134	0	40	94	0	60
CAMPBELL	30	0	3	27	0	3
CHARLES MIX	100	2	29	69	2	53
CLARK	83	0	10	73	0	13
CLAY	163	3	52	108	3	77
CODINGTON	417	4	154	259	6	225
CORSON	67	1	25	41	1	35
CUSTER	208	4	77	127	4	115
DAVISON	628	3	178	447	3	264
DAY	136	3	24	109	5	33
DEUEL	97	0	20	77	0	32
DEWEY	32	1	8	23	1	16
DOUGLAS	37	0	9	28	0	21
EDMUNDS	85	1	16	68	1	22
FALL RIVER	102	0	27	75	0	39
FAULK	43	0	9	34	0	9
GRANT	94	1	36	57	1	54
GREGORY	88	1	19	68	1	35
HAAKON	69	1	16	52	1	26
HAMLIN	94	1	16	77	1	20
HAND	100	0	20	80	0	34
HANSON	90	0	27	63	0	35
HARDING	36	0	3	33	0	4
HUGHES	383	1	87	295	1	127
HUTCHINSON	95	2	23	70	2	37
HYDE	25	1	2	22	1	3
JACKSON	76	1	16	59	1	34
JERAULD	40	0	5	35	0	6
JONES	57	1	8	48	1	10
KINGSBURY	115	0	22	93	0	26
LAKE	210	0	55	155	0	74
LAWRENCE	625	5	171	449	5	241
LINCOLN	349	5	116	228	8	170
LYMAN	113	1	32	80	2	57
MC COOK	144	2	40	102	2	58
MC PHERSON	24	1	9	14	1	12

TABLE 3-8 (continued)

County	Total Accd.	Fatal Accd.	Injury Accd.	PDO Accd	Fatalities	Injuries
MARSHALL	63	2	25	36	2	38
MEADE	390	8	120	262	8	185
MELLETTE	26	0	6	20	0	10
MINER	72	0	13	59	0	19
MINNEHAHA	3,135	17	1,024	2,094	17	1,497
MOODY	162	2	49	111	2	69
PENNINGTON	2,149	19	764	1,366	22	1,145
PERKINS	44	1	17	26	1	24
POTTER	54	1	4	49	1	6
ROBERTS	95	3	39	53	4	65
SANBORN	65	0	13	52	0	17
SHANNON	45	6	14	25	8	40
SPINK	165	1	37	127	1	62
STANLEY	65	2	26	37	2	38
SULLY	60	0	14	46	0	18
TODD	33	4	12	17	4	25
TRIPP	124	2	27	95	2	41
TURNER	116	0	37	79	0	46
UNION	179	0	67	112	0	94
WALWORTH	103	1	23	79	6	31
YANKTON	351	2	84	265	2	118
ZIEBACH	11	1	2	8	1	3
Total:	14,821	127	4,455	10,239	147	6,579

Source: Department of Transportation: Accident Records

TABLE 3-9
COUNTIES HAVING MORE THAN TWO PERCENT OF THE
RURAL FATAL & INJURY ACCIDENTS
1988

County	Rural Fatal & Injury Accidents	Percent of All Rural Fatal & Injury Accidents	Rural VMTS
PENNINGTON	215	10.8	364,089,884
MINNEHAHA	163	8.2	312,187,183
LAWRENCE	130	6.5	138,987,282
MEADE	108	5.4	147,041,664
LINCOLN	97	4.9	188,737,182
BROWN	73	3.7	188,198,354
BROOKINGS	71	3.6	126,997,751
CUSTER	71	3.6	100,771,155
UNION	54	2.7	162,088,511
MOODY	43	2.2	102,256,506
CODINGTON	41	2.1	106,086,805
Total	1,066	53.5	

Source: Department of Transportation: Accident Records

FIGURE 3-5 RURAL F&I ACC/VMT'S

SELECTED COUNTIES

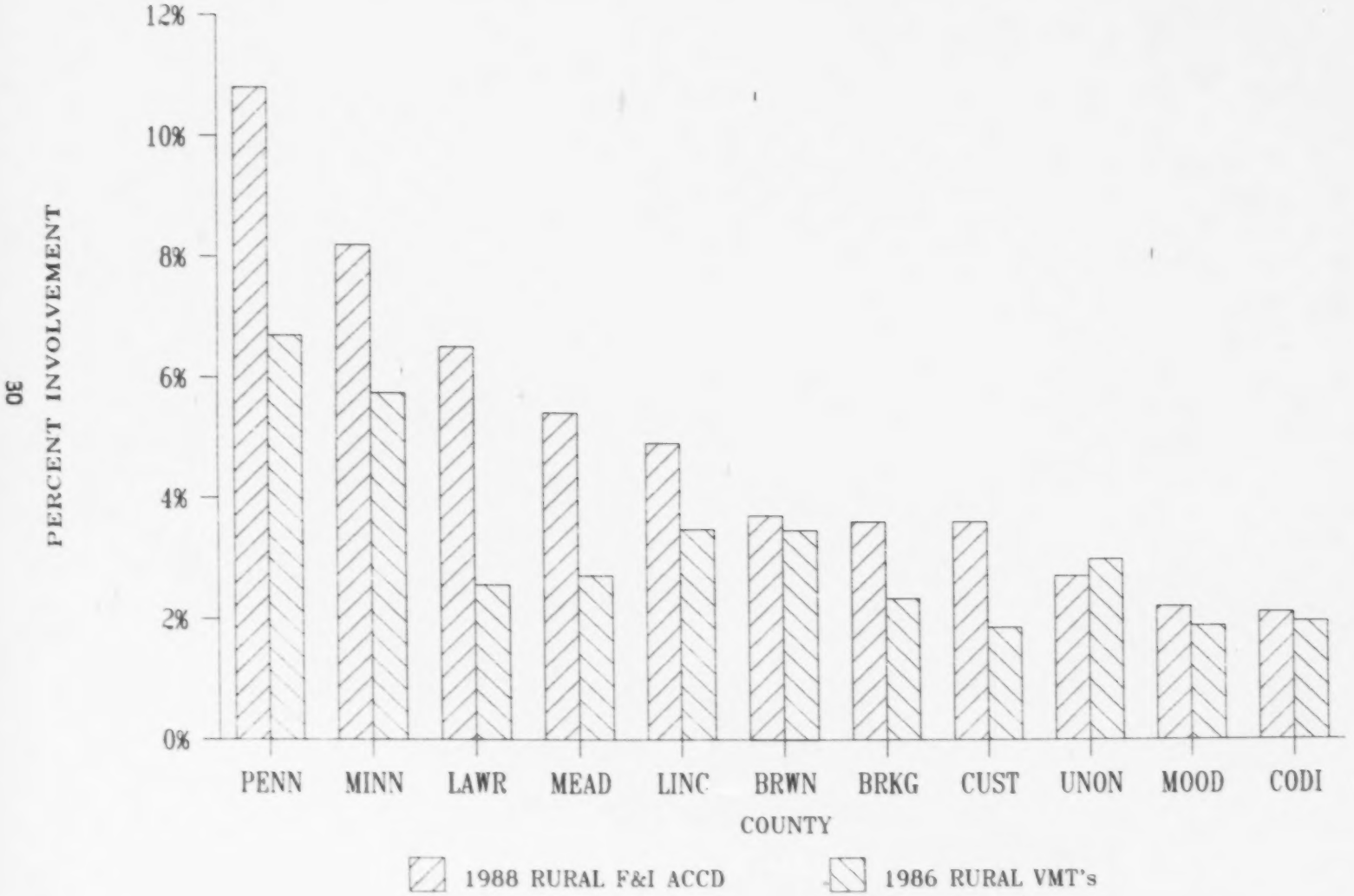


TABLE 3-10
TRAFFIC ACCIDENTS SOUTH DAKOTA CITIES
POPULATION 2500 AND OVER
1988

City	Total Accd.	Fatal Accd.	Injury Accd.	PDO Accd.	Fatalities	Injuries
Aberdeen	623	0	185	438	0	253
Belle Fourche	60	0	15	45	0	20
Box Elder	15	0	5	10	0	9
Brandon City	28	0	11	17	0	17
Brookings	227	0	62	165	0	88
Canton	48	0	15	33	0	26
Hot Springs	46	0	11	35	0	16
Huron	299	0	108	191	0	154
Lead	58	0	8	50	0	13
Madison	97	0	28	69	0	38
Milbank	40	0	14	26	0	19
Mitchell	520	1	155	364	1	223
Mobridge	52	0	11	41	0	15
Pierre	314	0	70	244	0	95
Rapid City	1,469	7	549	913	8	813
Redfield	31	0	6	25	0	10
Sioux Falls	2,497	8	850	1,639	8	1,221
Sisseton	16	0	4	12	0	4
Spearfish	106	0	27	79	0	36
Sturgis	82	0	19	63	0	26
Vermillion	88	0	28	60	0	37
Watertown	294	1	115	178	1	164
Winner	57	0	10	47	0	13
Yankton	203	0	45	158	0	64

Source: Department of Transportation: Accident Records

TABLE 3-11
ROADWAY SURFACE CONDITIONS
1988

	Total Accidents		Fatal Accidents		Injury Accidents		PDO Accidents	
	No.	%	No.	%	No.	%	No.	%
Dry	10,269	69.3	102	80.3	3,345	75.1	6,822	66.6
Wet	1,078	7.3	8	6.3	338	7.6	732	7.1
Ice	2,026	13.7	10	7.9	446	10.0	1,570	15.3
Frost	178	1.2	1	0.8	57	1.3	120	1.2
Slush	195	1.3	1	0.8	46	1.0	148	1.4
Snow	925	6.2	4	3.1	185	4.2	736	7.2
Mud	10	0.1	0	0.0	3	0.1	7	0.1
Other	80	0.5	1	0.8	31	0.7	48	0.5
Unknown	60	0.4	0	0.0	4	0.1	56	0.5
Total:	14,821	100	127	100	4,455	100	10,239	100

Source: Department of Transportation: Accident Records

Accidents by Time of Day, Month, and Day of Week

The late afternoon, 3:00-5:59 p.m., was the peak three-hour period for accidents to occur. Nearly twenty-three percent of property damage only and 24.6 percent of injury accidents occurred during this time period. The one-hour period, 11:00 p.m.-12:00 a.m., had the most fatal accidents (12), and the most fatalities (16) (see TABLE 3-12).

The summer months had the most fatal and injury accidents during 1988, while the winter months had more PDO accidents. Thirty-seven percent of the fatal accidents and 28.7 percent of the injury accidents occurred in June, July, and August. There is more vacation and other recreational travel during these months. Months January, February, November and December accounted for nearly 43 percent of the total property damage only accidents. The road conditions in the winter months contribute to the increase in PDO accidents (see TABLE 3-13).

Friday and Saturday account for 33.8 percent of the injury accidents, while Saturday and Sunday account for 41.7 percent of the fatal accidents (see TABLE 3-14).

FIGURES 3-6 through 3-8 illustrate the trends of time of day, month, and day of week.

TABLE 3-12
ACCIDENTS BY TIME OF DAY
1988

Time	Total Accd.	Fatal Accd.	Injury Accd.	PDO Accd.	Fatalities	Injuries
Midnight	366	4	111	251	4	180
1:00 AM	368	8	115	245	9	165
2:00 AM	336	7	131	198	9	193
3:00 AM	167	1	74	92	1	109
4:00 AM	128	4	38	86	4	56
5:00 AM	205	4	54	147	5	69
6:00 AM	318	4	95	219	4	139
7:00 AM	586	1	156	429	1	211
8:00 AM	645	3	187	455	3	283
9:00 AM	509	0	152	357	0	217
10:00 AM	561	4	170	387	4	242
11:00 AM	724	3	200	521	3	313
12:00 PM	830	6	266	553	6	386
1:00 PM	782	6	229	547	6	363
2:00 PM	826	4	271	551	4	392
3:00 PM	1,202	4	399	799	9	604
4:00 PM	1,111	3	371	737	3	555
5:00 PM	1,106	7	328	771	11	463
6:00 PM	795	10	222	563	11	348
7:00 PM	745	8	193	544	8	290
8:00 PM	616	7	177	432	7	242
9:00 PM	653	8	180	465	9	275
10:00 PM	568	4	146	418	5	218
11:00 PM	487	12	138	337	16	206
Unknown	187	5	52	130	5	60
	14,821	127	4,455	10,239	147	6,579

Source: Department of Transportation: Accident Records

TABLE 3-13
ACCIDENTS BY MONTH
1988

Month	Total Accd.	Fatal Accd.	Injury Accd.	PDO Accd.	Fatalities	Injuries
JANUARY	1,624	4	398	1,222	5	560
FEBRUARY	1,355	2	351	1,002	2	492
MARCH	937	8	269	660	9	404
APRIL	921	15	327	579	18	502
MAY	1,067	11	369	687	16	528
JUNE	1,160	13	435	712	13	647
JULY	1,141	12	388	741	14	591
AUGUST	1,268	22	455	791	26	673
SEPTEMBER	1,136	7	350	779	8	529
OCTOBER	1,356	4	425	927	4	619
NOVEMBER	1,463	16	338	1,109	19	503
DECEMBER	1,393	13	350	1,030	13	531
Total	14,821	127	4,455	10,239	147	6,579

Source: Department of Transportation: Accident Records

TABLE 3-14
ACCIDENTS BY DAY OF WEEK
1988

Day	Total Accd.	Fatal Accd.	Injury Accd.	PDO Accd.	Fatalities	Injuries
SUNDAY	1,766	23	578	1,165	33	900
MONDAY	1,939	11	580	1,348	12	853
TUESDAY	2,035	16	607	1,412	19	868
WEDNESDAY	1,958	6	551	1,401	6	769
THURSDAY	2,106	20	635	1,451	22	924
FRIDAY	2,613	21	767	1,825	21	1,141
SATURDAY	2,404	30	737	1,637	34	1,124
Total	14,821	127	4,455	10,239	147	6,579

Source: Department of Transportation: Accident Records

FIGURE 3–6 ACCIDENTS BY TIME OF DAY

1988

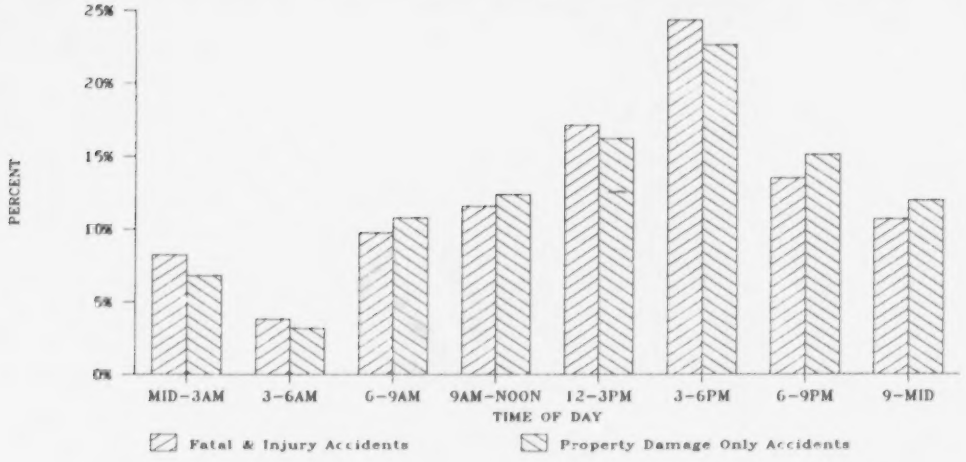


FIGURE 3–7 ACCIDENTS BY MONTH

1988

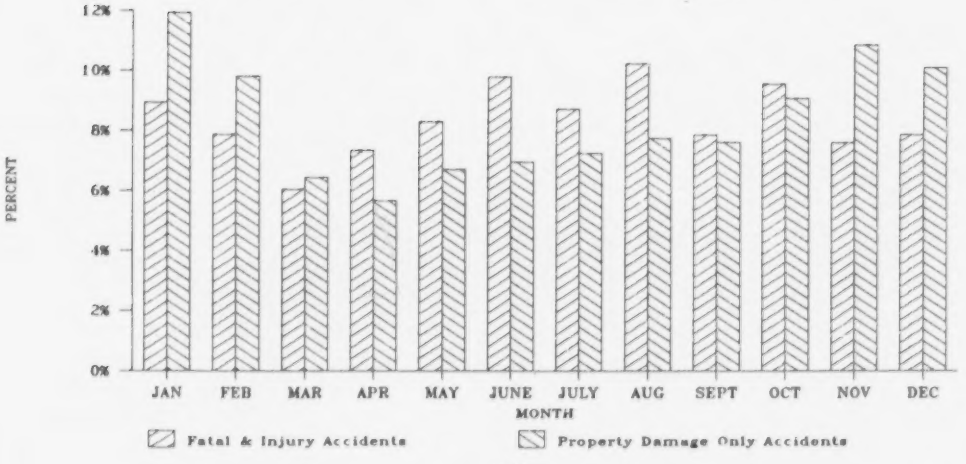
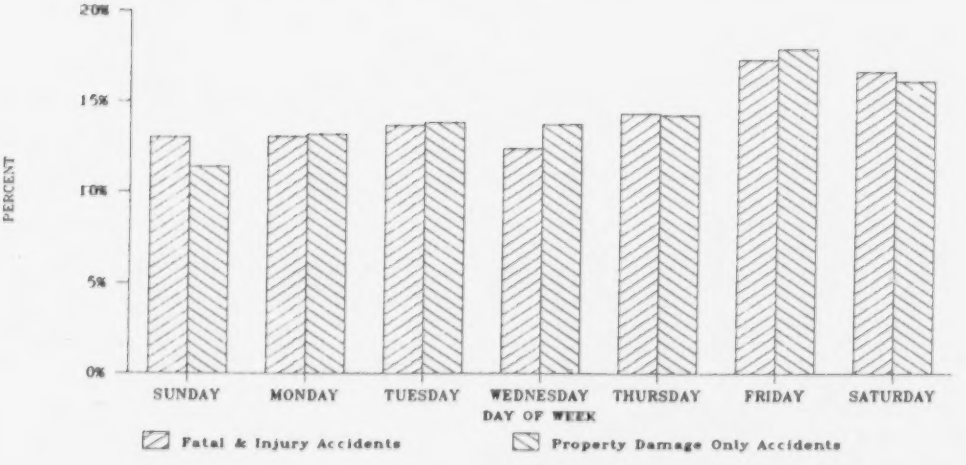


FIGURE 3–8 ACCIDENTS BY DAY OF WEEK

1988



Drivers

There were 23,057 motor vehicle drivers in the 14,821 reported motor vehicle accidents, including 163 drivers in fatal accidents and 7,156 drivers in injury accidents. Eighty-two drivers were killed, which is 55.8 percent of all persons killed in motor vehicle accidents and 63.7 percent or 4,191 of the 6,579 injured were drivers.

Young drivers are involved in more accidents than any other age group (see TABLE 3-15). Thirty-seven percent of the drivers in reported accidents are under 25 years of age and 60.5 percent are under 35. Age of drivers involved in fatal and injury accidents follow the pattern of drivers in all accidents. Those drivers under 25 represent 29.4 percent of the drivers involved in fatal accidents and 38.9 percent of the drivers in injury accidents. Drivers under the age of 35 make up 57.1 percent of the drivers in fatal accidents and 61.9 percent of the drivers in injury accidents.

TABLE 3-15
AGE OF DRIVERS IN ACCIDENTS
1988

Age	Drivers In All Accidents No.	%	Drivers In Fatal Accidents No.	%	Drivers In Injury Accidents No.	%	Drivers In PDO Accidents No.	%
6-13	22	0.1	0	0.0	10	0.1	12	0.1
14-15	733	3.2	6	3.7	215	3.0	512	3.3
16-18	3,307	14.3	14	8.6	1,126	15.7	2,167	13.8
19-20	1,794	7.8	10	6.1	583	8.1	1,201	7.6
21-24	2,725	11.8	18	11.0	847	11.8	1,860	11.8
25-34	5,357	23.2	45	27.6	1,652	23.1	3,660	23.3
35-44	3,399	14.7	24	14.7	1,030	14.4	2,345	14.9
45-54	1,864	8.1	17	10.4	561	7.8	1,286	8.2
55-64	1,573	6.8	13	8.0	482	6.7	1,078	6.8
65-Over	2,078	9.0	14	8.6	614	8.6	1,450	9.2
Unknown	205	0.9	2	1.2	36	0.5	167	1.1
Total	23,057	100	163	100	7,156	100	15,738	100

Source: Department of Transportation: Accident Records

Drinking drivers are of major concern because of the number of alcohol-involved serious accidents. TABLE 3-16 provides information on the age of drinking drivers in motor vehicle accidents. There were a reported 1,602 drinking drivers in all accidents which is 6.9 percent of all drivers in accidents. Sixty-seven or 41.1 percent of drivers in fatal accidents had been drinking while 11.4 percent of the drivers involved in injury accidents had been drinking. Young drivers are predominantly the drinking drivers in accidents. Those drivers under 25 years of age accounted for 37.3 percent of the drinking drivers in fatal accidents, and, nearly half of the drinking drivers in injury and property damage only accidents. Those drivers under 35 years of age accounted for three-fourths of the drinking drivers in fatal accidents and 76.2 percent of the drinking drivers in all accidents.

TABLE 3-16
AGE OF DRINKING DRIVERS IN ACCIDENTS
1988

Age	Drivers In All Accidents No.	%	Drivers In Fatal Accidents No.	%	Drivers In Injury Accidents No.	%	Drivers In PDO Accidents No.	%
6-13	0	0.0	0	0.0	0	0.0	0	0.0
14-15	14	0.9	1	1.5	7	0.9	6	0.8
16-18	213	13.3	6	9.0	117	14.3	90	12.6
19-20	212	13.2	8	11.9	106	12.9	98	13.7
21-24	290	18.1	10	14.9	151	18.4	129	18.0
25-34	491	30.6	25	37.3	260	31.7	206	28.8
35-44	223	13.9	8	11.9	113	13.8	102	14.2
45-54	87	5.4	4	6.0	33	4.0	50	7.0
55-64	39	2.4	2	3.0	21	2.6	16	2.2
65-Over	28	1.7	2	3.0	10	1.2	16	2.2
Unknown	5	0.3	1	1.5	1	0.1	3	0.4
Total	1,602	100	67	100	819	100	716	100

Source: Department of Transportation: Accident Records

TABLE 3-17 compares age of drivers in fatal and injury accidents, drinking drivers in fatal and injury accidents, and speeding drivers in fatal and injury accidents with licensed drivers by age. Again the young driver is over represented as those drivers in fatal and injury accidents, drinking drivers in fatal and injury accidents, and speeding drivers in fatal and injury accidents. Nearly 19 percent of the licensed drivers in South Dakota were under 25, but 45.7 percent of the drinking drivers in fatal and injury accidents and 54.7 percent of the speeding drivers in fatal and injury accidents were under 25 years of age. Seventy-eight percent of the drinking drivers and speeding drivers in fatal and injury accidents were under 35 years of age while drivers under 35 years of age constitute 41 percent of all licensed drivers (also see FIGURES 3-9 and 3-10).

TABLE 3-17
LICENSED DRIVERS AND FATAL AND INJURY ACCIDENT-INVOLVED DRIVERS BY AGE
1988

Age	Licensed Drivers %	Drivers In Fatal & Injury Accidents No.	%	Drinking Drivers In Fatal & Injury Accidents No.	%	Speeding Drivers In Fatal & Injury Accidents No	%
0-13	0.0	10	0.1	0	0.0	4	0.4
14-15	1.5	221	3.0	8	0.9	64	5.6
16-17	3.4	771	10.5	66	7.4	165	14.5
18	2.0	369	5.0	57	6.4	75	6.6
19	2.0	305	4.2	49	5.5	82	7.2
20	2.0	288	3.9	65	7.3	70	6.2
21-24	7.8	865	11.8	161	18.2	162	14.2
25-34	22.3	1,697	23.2	285	32.2	273	24.0
35-44	18.3	1,054	14.4	121	13.7	121	10.6
45-54	12.2	578	7.9	37	4.2	42	3.7
55-64	11.8	495	6.8	23	2.6	46	4.0
65-Over	16.8	628	8.6	12	1.4	27	2.4
Unknown	0.0	38	0.5	2	0.2	7	0.6
TOTAL	100	7,319	100	886	100	1,138	100

Sources: Department of Transportation: Accident Records
Department of Commerce & Regulation: Driver License Issuance

FIGURE 3-9 DRIVERS BY AGE GROUP 1988

Fatal and Injury Accd. Involved Drivers

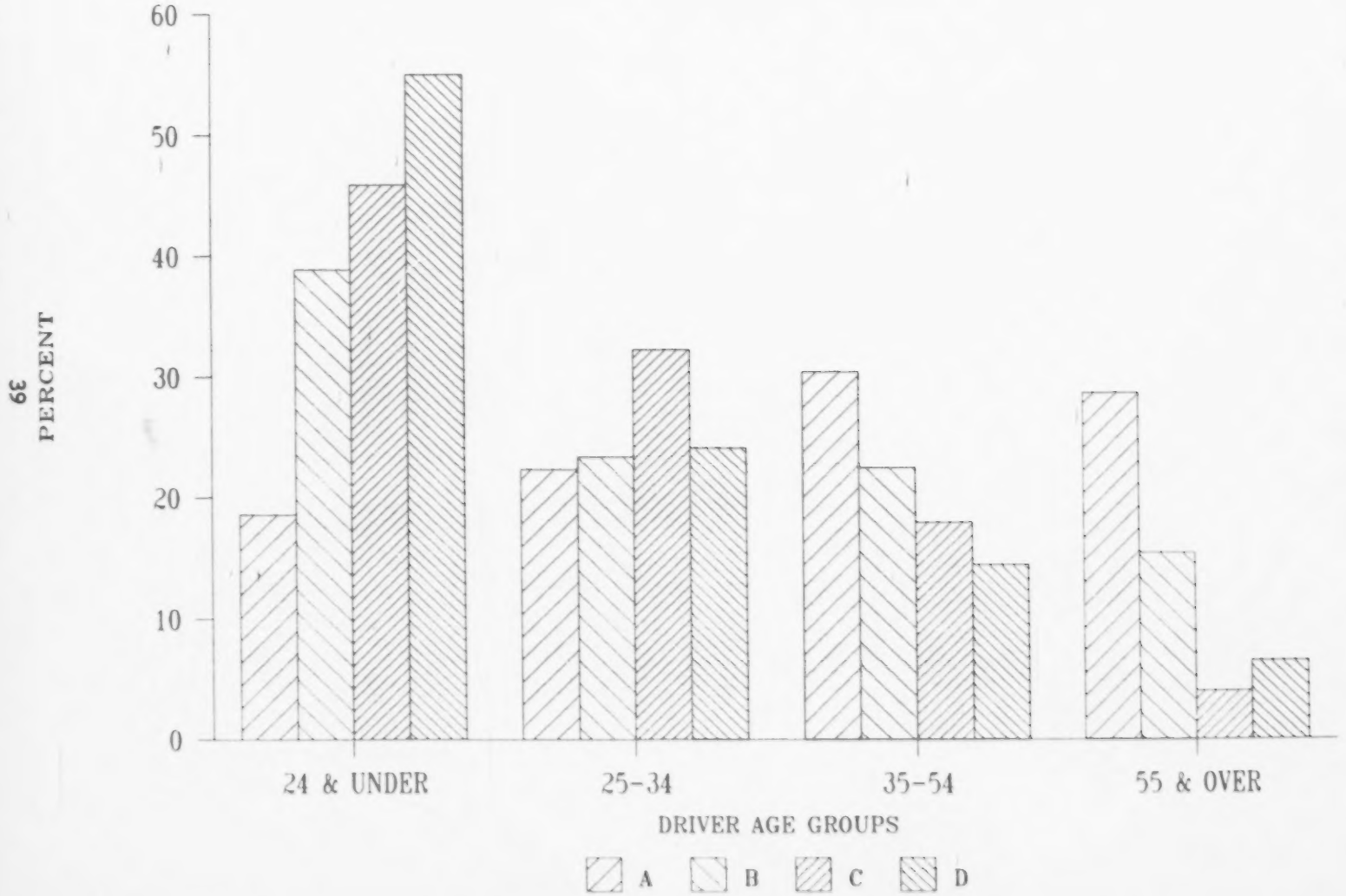
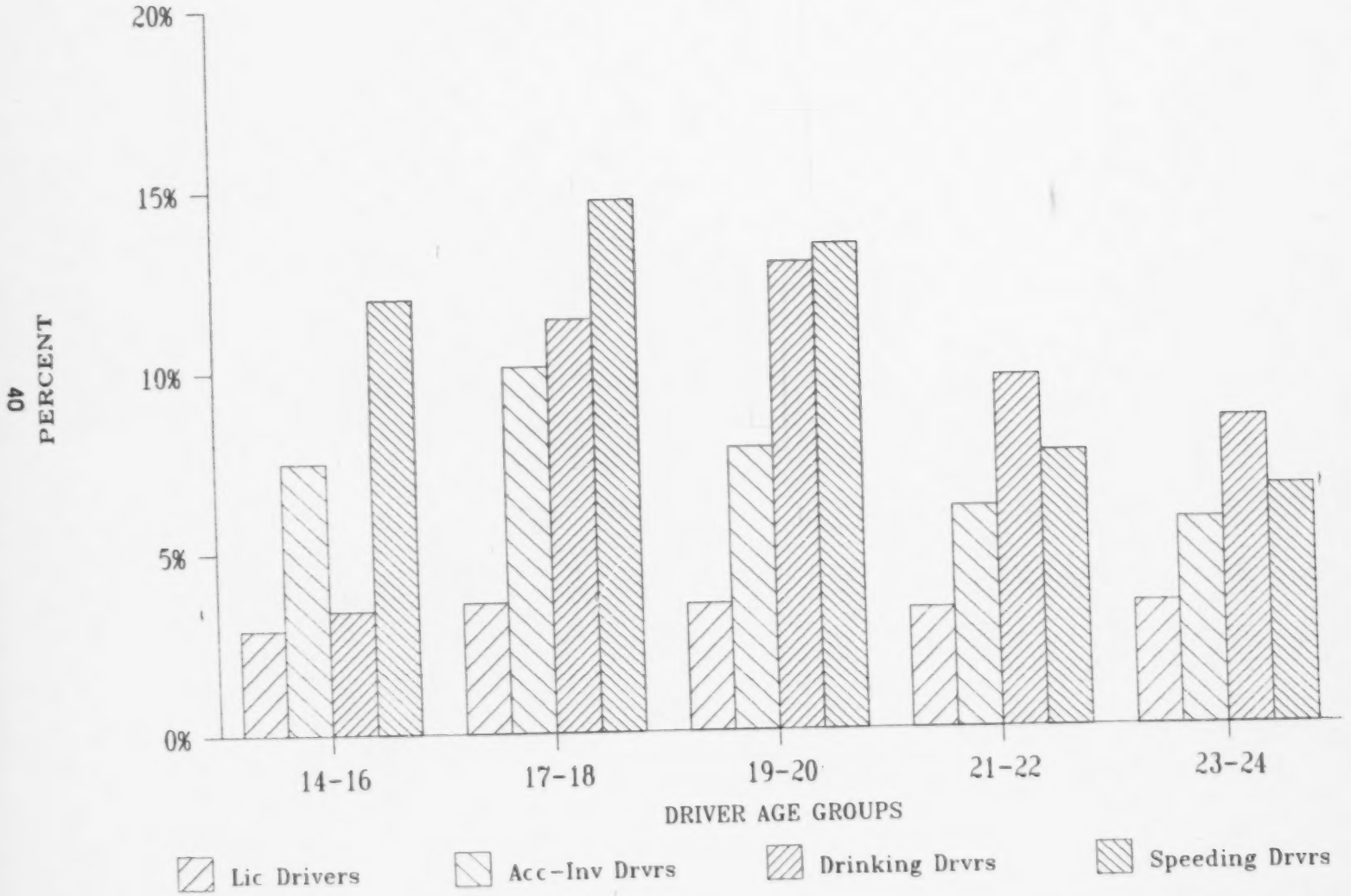


FIGURE 3-10 YOUNG DRIVERS 1988

FATAL & INJURY ACCIDENT-INVOLVED DRIVERS



Driver actions are reported to indicate possible factors that may have contributed to the accidents. These factors are referred to as driver contributing circumstances. Drinking was the leading driver contributing circumstance in fatal accidents during 1988. It was indicated that the drinking of 67 or 41.1 percent of the drivers in fatal accidents contributed to the accident. Exceeding the speed limit and driving on the wrong side of the road were the other leading driver contributing circumstance in fatal accidents. Failing to yield to another vehicle was the leading contributing circumstance in injury accidents. Drinking and exceeding a safe speed but not the legal limit were other leading driver contributing circumstances in injury accidents (see TABLE 3-18).

TABLE 3-18
MOTOR VEHICLE DRIVER CONTRIBUTING CIRCUMSTANCES
1988

	Total Accidents		Fatal Accidents		Injury Accidents		PDO Accidents	
	No.	%	No.	%	No.	%	No.	%
No Contributing Circumstances	11,809	51.2	46	28.2	3,304	46.2	8,459	53.7
Drinking	1,602	6.9	67	41.1	819	11.4	716	4.5
Exceeded Speed Limit	1,001	4.3	32	19.6	472	6.6	497	3.2
Wrong Side of Road	524	2.3	21	12.9	212	3.0	291	1.8
Exceeded Safe Speed But Not Limit	1,896	8.2	13	8.0	621	8.7	1,262	8.0
Failed to Yield to Vehicle	3,132	13.6	9	5.5	1,022	14.3	2,101	13.3
Failed to Stop for Stop Sign Flashing Red	392	1.7	7	4.3	164	2.3	221	1.4
Fell Asleep	340	1.5	7	4.3	173	2.4	160	1.0
Improper Passing	243	1.1	3	1.8	67	0.9	173	1.1
Distracted by Object/ Person in Car	530	2.3	7	4.3	195	2.7	328	2.1
Improper Turn	613	2.7	2	1.2	166	2.3	445	2.8
Following Too Closely	975	4.2	1	0.6	359	5.0	615	3.9
Improper Backing	383	1.7	1	0.6	27	0.4	355	2.3
Other*	2,300	10.0	19	11.7	827	11.6	1,454	9.2
Unknown	646	2.8	11	6.7	197	2.8	438	2.8
Total Drivers	23,057		163		7,156		15,738	

Note: The investigating officer may assign from zero to three contributing circumstances to each driver; therefore, the number of drivers in motor vehicle accidents does not equal the number of contributing circumstances. The number of drivers having drinking as a contributing circumstance is equal to the number of reported drinking drivers in accidents.

*Other includes driving under posted minimum, failed to yield to pedestrian, disregarded stop and go signal, disregarded other traffic control devices, improper signal or failure to signal, turning from wrong lane, improper lane change, improper start from parked position, improper parking, failure to comply with license restrictions, drugs, illness, physical impairment, and illegally in roadway.

Source: Department of Transportation: Accident Records

Motorcycles

Motorcycle accidents constitute 2.9 percent of all accidents, 10.2 percent of all fatal accidents, and 8.3 percent of all injury accidents. There were 13 people killed and 441 injured on motorcycles in the 424 reported motorcycle accidents during 1988. The number of motorcycle accidents have shown a decline in the last few years, while the number of licensed motorcyclists have stabilized at approximately 45,000 (see TABLE 2-8). The young motorcycle driver is over represented in accidents when compared to their portion of licensed motorcycle operators. Twenty-six percent of all accident-involved drivers are less than 20 years of age and 63 percent are under 30 (see TABLE 3-19 and FIGURE 3-11).

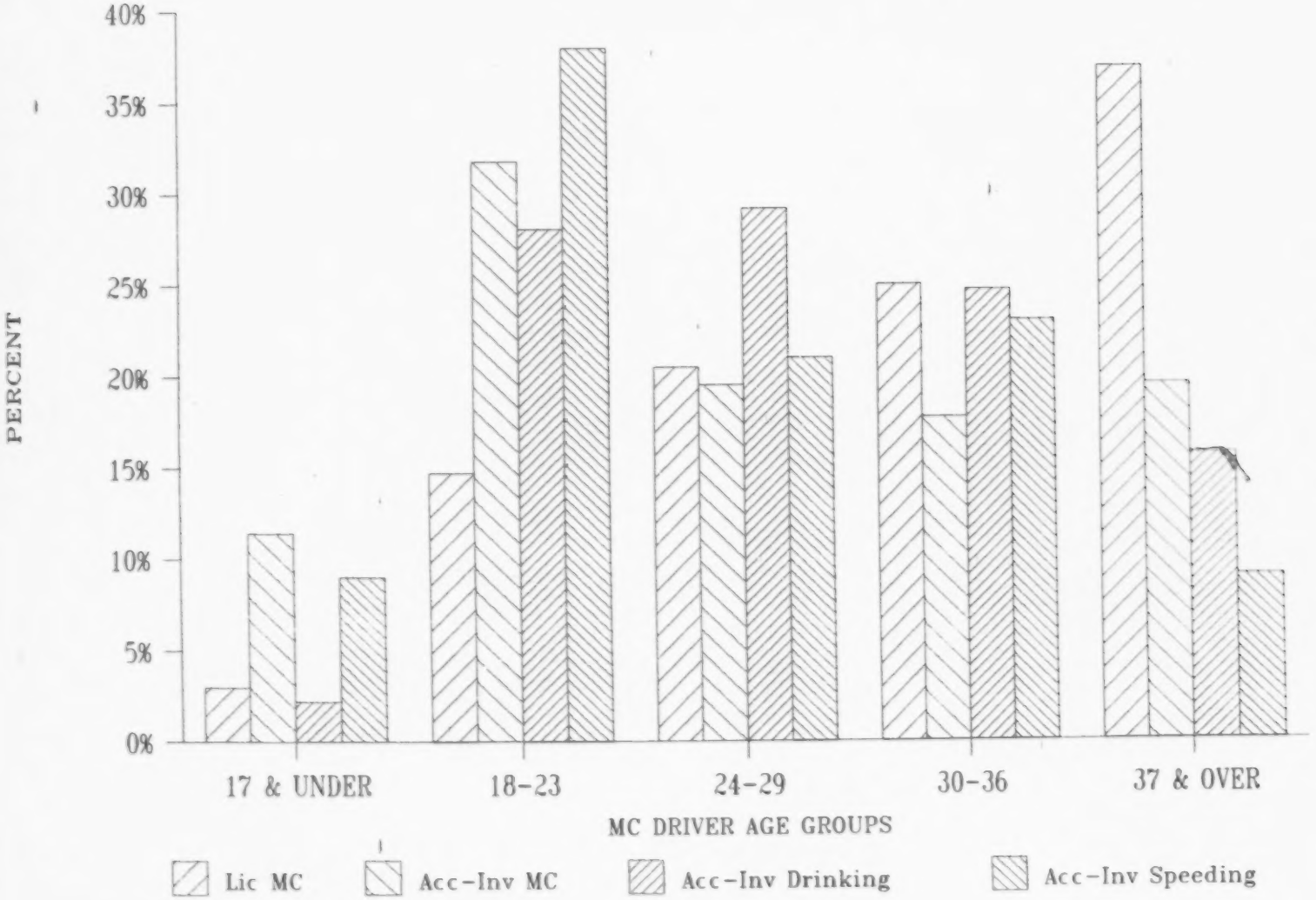
TABLE 3-19
MOTORCYCLISTS BY AGE GROUP
1988

Age Group	Licensed Motorcyclists No.	%	Motorcycle Drivers In Accidents No.	%	Drinking Motorcycle Drivers In Accidents No.	%	Speeding Motorcycle Drivers In Accidents No.	%
0-13	0	0.0	2	0.5	0	0.0	1	1.0
14-15	266	0.6	9	2.0	0	0.0	1	1.0
16-17	1,038	2.4	39	8.9	2	2.2	7	7.0
18-19	1,844	4.2	63	14.3	7	7.9	19	19.0
20-21	2,227	5.1	47	10.7	10	11.2	12	12.0
22-23	2,392	5.4	30	6.8	8	9.0	7	7.0
24-25	2,718	6.2	21	4.8	4	4.5	7	7.0
26-27	3,166	7.2	29	6.6	9	10.1	8	8.0
28-29	3,161	7.2	36	8.2	13	14.6	6	6.0
30-31	3,220	7.3	26	5.9	6	6.7	7	7.0
32-36	7,773	17.6	52	11.8	16	18.0	16	16.0
37-41	5,668	12.9	33	7.5	10	11.2	6	6.0
42-51	5,781	13.1	30	6.8	3	3.4	1	1.0
52-Over	4,804	10.9	21	4.8	1	1.1	2	2.0
Unknown	0	0	2	0.5	0	0.0	0	0.0
Total	44,058	100	440	—100	89	100	100	100

Sources: Department of Commerce & Regulation: Driver License Issuance
Department of Transportation: Accidents Records

FIGURE 3-11 MOTORCYCLISTS 1988

ACCIDENT-INVOLVED MOTORCYCLE & MOPED DRIVERS



Helmets were used by 93 or 22.6 percent of the motorcycle drivers in accidents while 319 or 77.4 percent did not wear a helmet (see TABLE 3-20). Twelve motorcycle drivers and one motorcycle passenger were killed during 1988; only two were wearing helmets.

TABLE 3-20
HELMET USE BY MOTORCYCLE DRIVERS IN ACCIDENTS
1988

Age	Helmet Used No.	%	Helmet Not Used No.	%
6-13	0	0.0	1	100.0
14-15	6	75.0	2	25.0
16-17	24	63.2	14	36.8
18-20	17	19.8	69	80.2
21-24	7	11.7	53	88.3
25-34	11	9.1	110	90.9
35-44	11	18.0	50	82.0
45-Over	17	45.9	20	54.1
Unknown	0	0.0	0	0.0
Total	93	22.6	319	77.4

Note: Percentages are row percents.

Source: Department of Transportation: Accident Records

Pedestrians

There were fourteen pedestrian deaths and 149 injuries in motor vehicle accidents during 1988 (see TABLE 3-21). The youngest pedestrian killed was one year old, while the oldest was 76. Of the injured pedestrians, 43.6 percent were under 14 years of age and 60.4 percent were under 21 years of age. Ninety-one percent of the pedestrian injuries occurred in a city (see TABLE 3-23).

Since 1970 there has been an average of 17 pedestrians killed in accidents each year (see TABLE 2-9). Illegally in roadway, and clothing not visible were the most common contributing circumstances in pedestrian fatalities. There were no contributing circumstances in 88 or 59 percent of the pedestrian injuries. Officers reported that four of the 14 pedestrians killed had been drinking alcohol (see TABLE 3-22). The average BAC of those pedestrians who had been drinking was 0.27 percent with BACs ranging from 0.26 percent to 0.29 percent.

TABLE 3-21
AGE OF PEDESTRIANS IN TRAFFIC ACCIDENTS
1988

	Fatalities		Injuries	
	No.	%	No.	%
0-5	3	21.4	26	17.4
6-13	1	7.1	39	26.2
14-19	0	0.0	18	12.1
20-24	2	14.3	15	10.1
25-34	1	7.1	17	11.4
35-44	0	0.0	13	8.7
45-54	1	7.1	4	2.7
55-64	3	21.4	7	4.7
65-Over	3	21.4	8	5.4
Unknown	0	0.0	2	1.3
Total	I4	100	149	100

Source: Department of Transportation: Accident Records

TABLE 3-22
ALCOHOL INVOLVEMENT BY PEDESTRIANS
1988

Alcohol Involvement	Fatalities No.	Fatalities %	Injuries No.	Injuries %
Alcohol or Drugs	4	28.6	18	12.1
No Alcohol	7	50.0	127	85.2
Unknown	3	21.4	4	2.7
Total	14	100	149	100

Source: Department of Transportation: Accident Records

TABLE 3-23
RURAL vs. CITY PEDESTRIAN ACCIDENTS
1988

	Fatalities	Injuries
Rural	12	13
City	2	136
Total	14	149

Source: Department of Transportation: Accident Records

Bicycles

There were two bicycle drivers killed and 134 injured in reported motor vehicle accidents during 1988 (see TABLE 3-24). There were three bicycle passengers injured during 1988. The leading factor in bicycle involved crashes was the bicycle driver failing to yield to a motor vehicle. Other bicyclist contributing circumstances were improper turning, being on the wrong side of the road, illegally in the roadway, and failing to stop for stop sign or flashing red light. Fifty-eight of the bicycle drivers in accidents had no contributing circumstances. **Bicycle injuries, which include three passengers, in 1988, increased 5.1 percent over the prior three-year average.** The yearly, 1970-1988, trend of bicycle fatalities and injuries is provided in TABLE 2-10.

TABLE 3-24
AGE OF BICYCLE DRIVERS IN TRAFFIC ACCIDENTS
1988

	Fatalities	Injuries	
	Number	Number	%
0-5	0	8	6.0
6-13	1	65	48.5
14-19	1	30	22.4
20-24	0	11	8.2
25-34	0	13	9.7
35-44	0	5	3.7
45-54	0	2	1.5
55-64	0	0	0.0
65-Over	0	0	0.0
Unknown	0	0	0.0
Total	2	134	100

Source: Department of Transportation: Accident Records

IV. GLOSSARY OF TERMS

Reportable Traffic Accident: motor vehicle traffic accident which involves death, injury or property damage to an apparent extent of five hundred dollars or more to any one person's property or accumulated property damage of one thousand dollars per accident.

Fatal Accident: motor vehicle traffic accident in which at least one person dies as the result of the accident and dies within 30 days of the date of the accident.

Injury Accident: motor vehicle accident in which at least one person was injured and no one was killed.

Property Damage Only (PDO) Accident: motor vehicle accident in which no one was killed or injured but there was property damage to an apparent extent of five hundred dollars or more to any one person's property or accumulated property damage of one thousand dollars per accident.

Fatality Rate: number of traffic fatalities per 100 million vehicle miles traveled.

Alcohol Involved Accident (1983-1988): at least one driver, pedestrian, or bicycle driver had been drinking in the opinion of the investigating officer.

Economic Loss: the calculable costs of motor vehicle accidents are wage loss, medical expense, insurance administration cost, and property damage. (Source: Estimating the Costs of Accidents 1987, National Safety Council)

MARKS
SPOT
THE
WHY DIE?
Drive safely

SOUTH Dakota

Department of Commerce and Regulation
118 West Capitol Avenue
Pierre, South Dakota 57501

Bulk Rate
U.S. Postage
PAID
Pierre, S.D. 57501
Permit 24

IR) SRI